ONKYO

TX-NR535

AV RECEIVER

Advanced Manual

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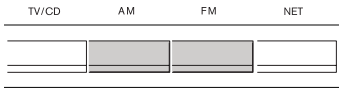
Details on AM/FM playback

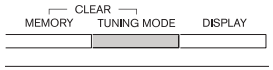
Choosing the Radio Station

■ Tuning into stations automatically

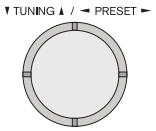
1. Press AM or FM on the unit to select either "AM" or "FM".



2. Press TUNING MODE, so that the "AUTO" indicator on the display lights.



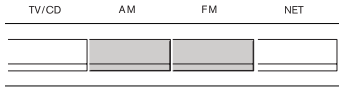
3. Press ▼TUNING▲. The automatic search for a radio station starts. Searching stops when one is found. When tuned into a radio station, the "►TUNED◄" lights on the display lights. When tuned into an FM radio station, the "FM STEREO" indicator lights.
   - No sound is output while the "►TUNED◄" indicator is off.



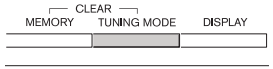
When the signal from an FM radio station is weak: Depending on the structure of the building and the surrounding environment, the radio wave condition is different and it may be impossible to get good reception. In that case, manually tune into the radio station of your choice by referring to the next section.

■ Tuning into stations manually

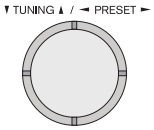
1. Press AM or FM on the unit to select either "AM" or "FM".



2. Press TUNING MODE, so that the "AUTO" indicator on the display goes off.



3. Press and hold ▼TUNING▲ to select the desired radio station.
   - The frequency changes by 1 step each time you press the button. The frequency changes continuously if the button is held down and stops when released. Tune by looking at the display.

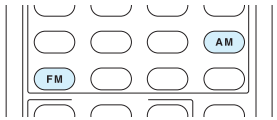


To return the indicator to "AUTO": Press TUNING MODE again on the main unit. The unit automatically tunes into an FM station. Normally, leave the indicator in "AUTO".

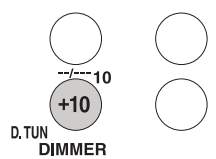
■ Tuning into stations by frequency

It allows you to directly enter the frequency of the radio station you want to listen to.

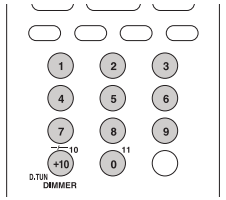
1. Press AM or FM on the remote controller to select either "AM" or "FM".



2. Press D.TUN.



3. Using the number buttons, enter the frequency of the radio station within 8 seconds.
   - For example, to tune to 87.5 (FM), press 8, 7, 5 or 8, 7, 5, 0. If you have entered the wrong number, you can retry after 8 seconds.

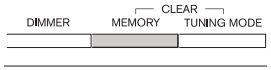


Registering Radio Station

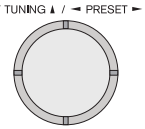
It allows you to register up to 40 of your favorite AM/FM radio stations. Registering radio stations in advance allows you to tune into your radio station of choice directly.

■ Registration

1. Tune into the AM/FM radio station you want to register.
2. Press MEMORY on the unit, so that the preset number flashes on the display.



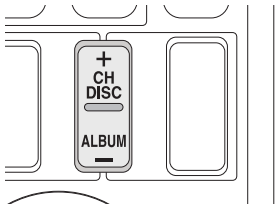
3. Repeatedly press ◄PRESET► to select a number between 1 and 40 while the preset number is flashing (about 8 seconds).



4. Press MEMORY again to register. The preset number stops flashing.
   - Repeat this procedure for all of your favorite AM/FM radio stations.

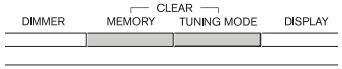
■ Selecting a Preset Radio Station

1. Press CH +/- on the remote controller to select a preset number.
   - You can also select by pressing ◄PRESET► on the unit. It is also possible to select by directly entering the preset number with the number buttons on the remote controller.



■ Deleting a Preset Radio Station

1. Select the preset number to delete.
2. While holding down MEMORY, press TUNING MODE on the unit to delete the preset number. The number on the display goes off.



Using RDS (European, Australian and Asian models)

RDS stands for Radio Data System and is a method of transmitting data in FM radio signals.

- RDS works only in areas where RDS broadcasts are available.
- In some cases, the text information appeared on the display is not identical to the content transmitted by the RDS station. Furthermore, unexpected characters may be displayed when the unit receives unsupported characters. However, this is not a malfunction.
- If the signal from an RDS station is weak, data may be displayed intermittently or not at all.

PS (Program Service): Tuning into a radio station transmitting Program Service information displays the radio station name. Pressing DISPLAY displays the frequency for 3 seconds.

RT (Radio Text): Tuning into a radio station transmitting Radio Text information displays text on the display of the unit.

PTY (Program Type): Allows you to search for RDS stations by program type.

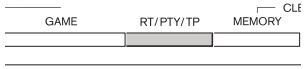
TP (Traffic Program): Allows you to search for radio stations transmitting traffic information.

■ Displaying Radio Text (RT)

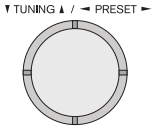
1. Press RT/PTY/TP on the unit once. RT (Radio Text) is displayed scrolling across the unit's display.
   - "No Text Data" is displayed when the radio station is not transmitting text information.

■ Searching by Type (PTY)

1. Press RT/PTY/TP on the unit twice. The current program type appears on the display.



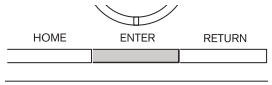
2. Press ◄PRESET► to select the type of program to search for.



   - The following RDS station types are displayed:
     None
     News (News reports)
     Affairs (Current affairs)
     Info (Information)
     Sport
     Educate (Education)
     Drama
     Culture
     Science (Science and technology)
     Varied
     Pop M (Pop music)
     Rock M (Rock music)
     Easy M (Middle of the road music)
     Light M (Light classics)
     Classics (Serious classics)
     Other M (Other music)
     Weather
     Finance
     Children (Children's programmes)
     Social (Social affairs)
     Religion
     Phone In
     Travel
     Leisure
     Jazz (Jazz music)
     Country (Country music)
     Nation M (National music)

Oldies (Oldies music)
Folk M (Folk music)
Document (Documentary)

3. Press ENTER to search for the selected type of radio station. Search continues until the selected type of radio station is found.

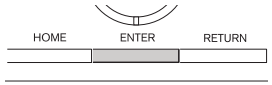


4. When the desired radio station is found, the station name on the display flashes. Then, press ENTER again.
   - "Not Found" is displayed if none is found.

■ Listening to Traffic Information (TP)

1. Press RT/PTY/TP on the unit thrice. The traffic information "[TP]" transmitted by the radio station you are tuned in is displayed.
   - "TP" is displayed without square brackets when the radio station is not transmitting traffic information.

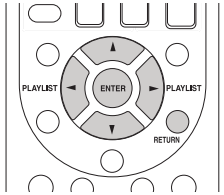
2. Press ENTER to search for a radio station transmitting traffic information. Search continues until a radio station transmitting traffic information is found.



3. When the desired radio station is found, the station name on the display flashes. Then, press ENTER again.
   - "Not Found" is displayed if none is found.

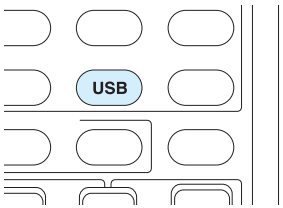
Playing Music Files on a USB Storage Device

● **Operation**: You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.

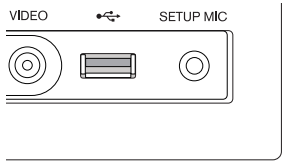


■ Playback

1. Press USB on the remote controller to select "USB".



2. Plug your USB storage device with the music files into the USB port of the unit, so that the "USB" lights on the display. The list of folders and music files on the USB storage device are displayed.
   - If the "USB" indicator flashes, check whether the USB storage device is plugged in properly.
   - Do not unplug the USB storage device while "Connecting..." is displayed on the display. This may cause data corruption or malfunction.



3. Press ENTER.
   - To open a folder, use cursor to select it, and then press ENTER.
4. Select the folder and file to play using the cursor buttons, then press ENTER or ► to start playing.

Listening to Internet Radio

Summary of Internet Radio

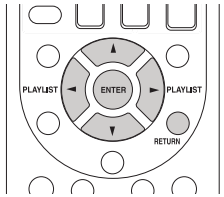
Internet radio, also know as online radio, webcasting, streaming radio etc., is a general term for service provider site which offers an audio service transmitted via the Internet. There is a lot of web sites that provide such services all over the world, from terrestrial radio stations to personal web sites.
This unit comes preset with Internet radio stations (*) such as TuneIn for you to enjoy these services, just by connecting the unit to the Internet.

* Network services or contents may become unavailable if the service provider terminates its service.

TuneIn

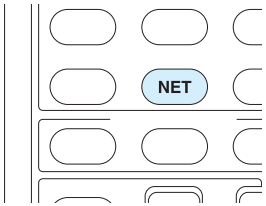
With more than 70,000 radio stations and 2 million on-demand programs registered, TuneIn is a service where you can enjoy music, sports and news from all over the world.

● **Operation**: You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.



■ Playback

1. Press NET on the remote controller. The NET screen is displayed and the "NET" indicator lights on the display.
   - The same operation can be done by selecting “Network Service” in the Home menu.



2. Select "TuneIn" using the cursor buttons, and then press ENTER. The TuneIn top menu screen is displayed.
3. Select a radio station or program using the cursor buttons, and then press ENTER.

■ Regarding the TuneIn Menu

To display the TuneIn menu, press MENU while playing a radio station, or select "Go to Menu" and press ENTER. Selecting the corresponding menu item with the cursor buttons and pressing ENTER allows you to perform the following operations:

Add to My Presets: Registers radio stations and programs in your "My Presets" within TuneIn. This allows you to play registered radio stations and programs with a simple operation. ("My Presets" is not displayed if it no radio stations or programs are registered.)

Remove from My Presets: Deletes a radio station or program from your "My Presets" within TuneIn.

Report a problem: Reports a problem or interactively solves a problem related to TuneIn.

View Schedule: Displays the radio station or program schedule.

Clear recents: Clears all radio stations and programs from the "Recents" within TuneIn. (This menu is displayed only when a radio station or program inside the "Recents" is being played.)

Add to My Favorites: Registers radio stations and programs in "My Favorites" on the NET screen. This allows you to play registered radio stations and programs with a simple operation.

■ Regarding the TuneIn Account

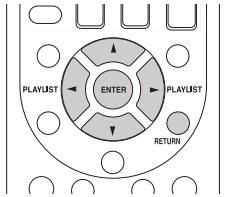
Creating an account on the TuneIn website allows you to automatically add radio stations and programs to your "My Presets" on the AV receiver as you save them on the website .
To display a radio station registered in "My Presets", you must log into TuneIn from the unit. To log in, select "Login" - "I have a TuneIn account" in the "TuneIn" top menu, and then enter your user name and password.

- Selecting "Login" - "Login with a registration code", and then associating the device on My Page within the TuneIn website by using the displayed registration code will allow you to log in from this unit without entering the user name and password.

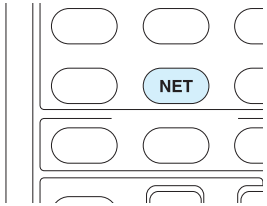
Pandora®–Getting Started (U.S., Australia and New Zealand only)

Pandora is a free, personalized Internet radio service that plays the music you know and helps you discover music you’ll love.

● **Operation**: You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.



1. Press NET on the remote controller. The NET screen displays and the “NET” indicator on the unit’s display lights. To display the NET screen, you can alternatively press HOME, select “Network Service” on the displayed Home menu, and then press ENTER.



2. With the cursor buttons on the remote controller, select “Pandora”, and then press ENTER.
3. Use ▲/▼ to select “I have a Pandora Account” or “I’m new to Pandora” and then press ENTER.
   If you are new to Pandora select “I’m new to Pandora”. You will see an activation code on your TV screen. Please write down this code. Go to an Internet connected computer and point your browser to www.pandora.com/onkyo. Enter your activation code and then follow the instructions to create your Pandora account and your personalized Pandora stations. You can create your stations by entering your favorite tracks and artists when prompted. After you have created your account and stations you can return to your Onkyo receiver and press enter to begin listening to your personalized Pandora.
   If you have an existing Pandora account, you can add your Pandora account to your Onkyo receiver by selecting “I have a Pandora Account” and logging in with your email and password.
   - If you want to use multiple user accounts, see “Using Multiple Accounts”. Login can be made from the “Users” screen.
4. To play a station, use ▲/▼ to select the station from your station list, and then press ENTER. Playback starts and the playback screen appears.

■ Create a New Station

Enter the name of a track, artist, or genre and Pandora will create a unique radio station for you based on the musical qualities of that track, artist, or genre.

I like this track: Give a track “thumbs-up” and Pandora will play more music like it.

I don’t like this track: Give a track “thumbs-down” and Pandora will ban that track from the current station.

Why is this track playing?: Discover some of the musical attributes that Pandora uses to create your personal radio stations.

I’m tired of this track: If you are tired of a track, you can put the track to sleep and Pandora will not play it for one month.

Create station from this artist: Creates a radio station from this artist.

Create station from this track: Creates a radio station from this track.

Delete this station: This will permanently delete a station from your Pandora account. All of your thumbs feedback will be lost should you choose to re-create the station with the same track or artist.

Rename this station: Lets you rename the current radio station.

Bookmark this artist: Pandora will bookmark your favorite artist for your profile on www.pandora.com.

Bookmark this track: Pandora will bookmark the current track and allow you to buy them all from Amazon or iTunes in one step!

Add to My Favorites: Adds a station to My Favorites list.

PANDORA®

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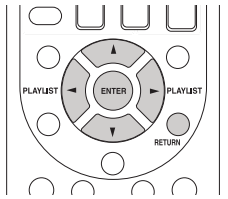
Using the SiriusXM Internet Radio (North American only)

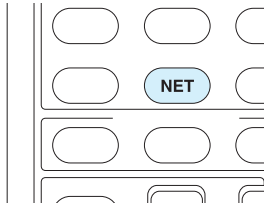
If you want to listen to the service, you must subscribe. To subscribe go to www.siriusxm.com/internetradio with your computer. When you subscribe, you will be provided with a username and password which has to be entered into the AV receiver. To use SiriusXM Internet Radio, you must have your AV receiver connected to the Internet. Using the remote control, follow these steps:

● **Operation**: You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.



■ Playback

1. Press NET on the remote controller. The NET screen displays and the “NET” indicator on the unit’s display lights. To display the NET screen, you can alternatively press HOME, select “Network Service” on the displayed Home menu, and then press ENTER.



2. With the cursor buttons on the remote controller, select “SiriusXM Internet Radio”, and then press ENTER.

3. Select “Sign In”, and then press ENTER. If you have an existing SIRIUS account, you can sign in by selecting “Sign In”. Enter your user name and password in the next keyboard screen, or in Web Setup. If you don’t know your username or password, call Sirius XM at (888) 539-7474 for assistance.
   - If you want to use multiple user accounts, see “Using Multiple Accounts”. Login can be made from the “Users” screen.

   Using the keyboard screen

   ① Use ▲/▼/◄/► and **ENTER** to enter your user name and password.
   ② Select “OK”.
   ③ Press ENTER. The “Confirm your entries” screen appears.
   ④ Press ENTER.
   “Please wait...” appears and then “SiriusXM Internet Radio” screen appears which displays the category available for selection.
4. Use ▲/▼ to select the category and then press ENTER. The channel list screen for the selected category appears.
5. Use ▲/▼ to select the desired channel and then press ENTER. The playback screen for the selected channel appears and you can listen to SiriusXM Internet Radio. You can control the tracks with the buttons on the remote control.
   Enabled buttons: ►, ■, I◄◄, ►►I

   Add to My Favorites: Adds a channel to My Favorites list.

   Add to Presets: Adds the currently playing station to presets list.

   Delete from Presets: Deletes the currently playing station from presets list.

SiriusXM INTERNET RADIO

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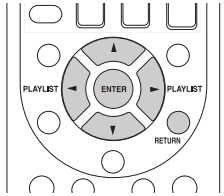
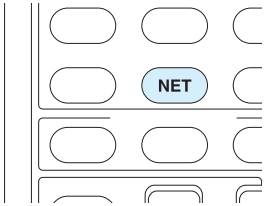
Using Slacker Personal Radio

● **Operation**: You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.



■ Playback

1. Press NET on the remote controller. The NET screen displays and the “NET” indicator on the unit’s display lights. To display the NET screen, you can alternatively press HOME, select “Network Service” on the displayed Home menu, and then press ENTER.



2. With the cursor buttons on the remote controller, select “Slacker Personal Radio”, and then press ENTER.
3. If you do not have an account, create one on the Slacker website (www.slacker.com) with your computer.
   If you already have a Slacker account, select “Sign in to your account” and then press ENTER. The keyboard screen appears. You can enter information from the remote control or the keys on the main unit.
4. If there are no mistakes in the information you have entered, use ▲/▼/◄/► to select “OK” then press ENTER. An account information confirmation screen appears.
5. If you do not have an account, select “Access without Sign In” and press ENTER to use a restricted version of the service. Note that use will be restricted.
   - If you want to use multiple user accounts, see “Using Multiple Accounts”. Login can be made from the “**Users**” screen.
6. Use ▲/▼ to select a menu item and then press ENTER. To sign out, use ▲/▼ to select “Sign out” from this screen and then press ENTER.
7. Use ▲/▼ to select a station and then press ENTER or ► to start playback from the station. The playback screen appears.
8. You can control the tracks with the buttons on the remote control.
   Enabled buttons: ►, ❚❚, ■, ►►I

   Rate Song as Favorite: Stores information to server, making it more likely that the song will be played again.

   Ban Song: Stores information to server, making it less likely that the song will be played again.

   Ban Artist: Stores information to server, making it less likely that the songs from this artist will be played again.

   Mark Favorite: Adds the currently playing station to your favorites.

   Unmark Favorite: Deletes the currently playing station from your favorites.

   Add song to Library: Adds the currently playing track to your library.

   Delete song from Library: Deletes the currently playing track from your library.

   Add to My Favorites: Adds a station or song to My Favorites list.

Using Multiple Accounts: The AV receiver supports multiple user accounts, which means you can freely switch between several logins. After registering user accounts, login is performed from the “Users” screen.
Press MENU while the Users screen is displayed. “Add new user”, “Remove this user” menu appear. You can either

store a new user account, or delete an existing one.

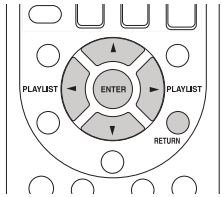
- Some of the services don't allow the use of multiple user accounts.
- You can store up to 10 user accounts.
- To switch between accounts you must first log out from the current account, and log in again on the "Users" screen.

Registering Other Internet Radios

To listen to other Internet radio program, register the program in the "My Favorites" menu on the NET screen as described below. The unit supports Internet radio stations stored in the following formats: PLS (URL ending in .pls), M3U (URL ending in .m3u) and RSS (URL ending in rss/rdf/xml).

- You can register up to 40 Internet radio stations.
- Depending on the data type and file format for playback, you may not be able to play an Internet radio station even when its format is PLS, M3U or Podcast (RSS).
- Available services may vary depending on your area of residence.

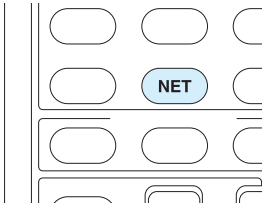
● **Operation**: You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.



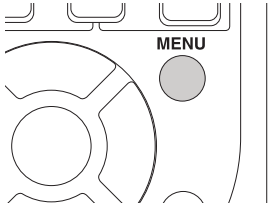
■ Registration

Before operation
The name and URL of the additional radio station will be needed for this procedure. Check the specifications before use.

1. Press NET on the remote controller. The NET screen is displayed and the "NET" indicator lights on the display.
   - The same operation can be done by selecting "Network Service" in the Home menu.



2. Select "My Favorites" using the cursor buttons, and then press ENTER. The "My Favorites" menu screen is displayed.
3. Select blank in "My Favorites" using the cursor buttons, and then press MENU. The menu screen is displayed.

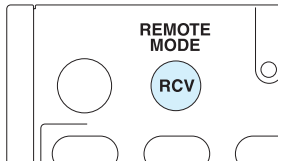


4. With the cursor buttons, select "Create new station", and then press ENTER. The keyboard screen is displayed.
5. Enter the name and URL of the radio station to add.
   - Select "Shift" and press ENTER to switch uppercase/lowercase. Select "Left" or "Right" and press ENTER to move the cursor to the selected direction. Select "BS" and press ENTER to remove a character on left of the cursor.

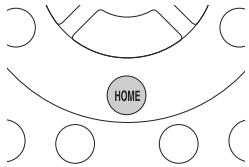
■ Registration using PC

Before operation
The name and URL of the additional radio station will be needed for this procedure. Check the specifications before use.

1. Press RCV on the remote controller. Always press RCV first to change the remote controller to RECEIVER mode (the mode to operate this unit) since its mode may be changed to operate another components.



2. Press HOME to display the Home menu screen.
   - The Home menu is also displayed when HOME on the unit is pressed.



3. Select "Setup" with the cursor buttons and press ENTER.
4. Select "12. Network Setup" with the cursor buttons ▲/▼ and press ENTER.
5. Select "IP Address" using cursor ▲/▼ to display the IP address.
   - Make note of displayed IP address as it will be used in later procedure.
6. Launch the web browser on PC or Smartphone etc. and enter the IP address of this unit in the browser's address bar. Status of the unit is displayed on the browser. ("WEB Setup")
   - If you are using Internet Explorer, you can also enter the URL by selecting "Open..." on the "File" menu.

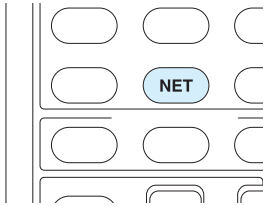
7. Click "My Favorites" tab, then enter the name and URL of the Internet radio station.
8. Click “Save” to register the entered Internet radio station in “My Favorite” on the unit.

To Rename a Registered Radio Station: During playing back a radio station or select a radio station in "My Favorites" using the cursor buttons, and then press MENU to display the Menu screen. Select "Rename this station" using the cursor buttons, press ENTER to display the key board screen and rename the station name as desired.

- The radio station name can also be renamed from "WEB Setup".

■ Playing a Registered Radio Station

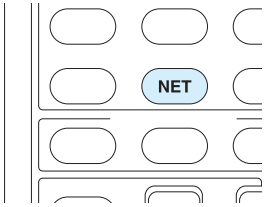
1. Press NET on the remote controller. The NET screen is displayed and the "NET" indicator lights on the display.
   - The same operation can be done by selecting “Network Service” in the Home menu.



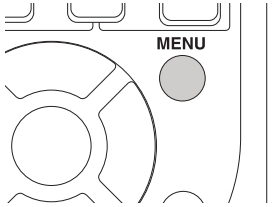
2. With the cursor buttons, select "My Favorites", and then press ENTER. The registered Internet radio stations are displayed.
3. Select a radio station to play using the cursor buttons, and press ENTER to start playback.

■ Deleting a Registered Radio Station

1. Press NET on the remote controller. The NET screen is displayed and the "NET" indicator lights on the display.



2. With the cursor buttons, select "My Favorites", and then press ENTER. The registered Internet radio stations are displayed.
3. Select a radio station to delete using the cursor buttons and press MENU. The menu screen is displayed.
   - The menu screen is also displayed when you press MENU during playing back of a radio station.

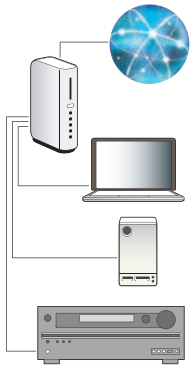


4. Select "Delete from My Favorites" using the cursor buttons, and then press ENTER.
   - The radio station can also be deleted from "WEB Setup".

Playing Music with DLNA

Summary of DLNA

DLNA (shortened word for Digital Living Network Alliance) is a non-profit collaborative trade organization which defining interoperability guidelines to enable sharing of digital media between multimedia devices sometimes, it also means the function itself.
This unit allows you to play music files stored on a PC or a hard disk connected to your home network (NAS device) Make sure the unit and PC or NAS device are connected to the same router.



- To play a music file with DLNA, you need a NAS device etc. with DLNA server functions and a DLNA player (software) to stream the music. You can also stream music files using a PC installed with Windows Media Player 11 or 12 as they are equipped with both DLNA server and player functions. To enable streaming, you must first configure the Windows Media Player 11 or Windows Media Player 12.
- With Windows Media Player 12 Remote Playback function, you can stream music files stored on your PC to the unit by operating the PC.

Configuring the Windows Media Player

■ Windows Media Player 11

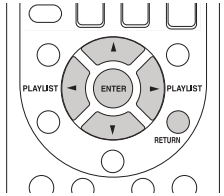
1. Turn on your PC and start Windows Media Player 11.
2. In the "Library" menu, select "Media Sharing". A dialog box is displayed.
3. Select the "Share my media" check box, and then click "OK". A list of supported devices are displayed.
4. Select this unit, and then click "Allow". The corresponding icon is checked.
5. Click "OK" to close the dialog box.

■ Windows Media Player 12

1. Turn on your PC and start Windows Media Player 12.
2. In the "Stream" menu, select "Turn on media streaming". A dialog box is displayed.
   - If media streaming is already turned on, select "More streaming options..." in the "Stream" menu to list players in the network.
     Proceed to step 4.
3. Click "Turn on media streaming". A list of players in the network is displayed.
4. Select this unit in "Media streaming options" and check that it is set to "Allow".
5. Click "OK" to close the dialog box.

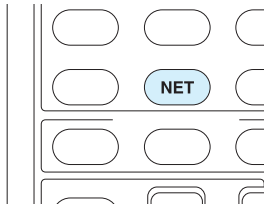
DLNA Playback

● **Operation**: You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.

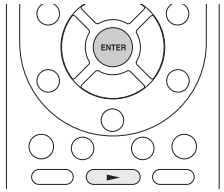


■ Playback

1. Start the server (Windows Media Player 11, Windows Media Player 12, or NAS device) storing the music files to play.
2. Press NET on the remote controller. The NET screen is displayed and the "NET" indicator lights on the display. If the "NET" flashes, the AV receiver is not properly connected to the network. When using a wired LAN connection, check the Ethernet cable connection, and when using a wireless LAN connection, check whether the "Wi-Fi" indicator on the left side of the AV receiver stays lit.



3. Select "DLNA" with the cursor buttons and press ENTER.
4. With the cursor buttons, select the target server, and then press ENTER. A list of items on the selected server is displayed.
   - Searching does not work in servers that do not support search functions.
   - The unit cannot access pictures and videos stored on servers.
   - Contents stored on the server may not be displayed depending on the server sharing settings.
5. Select a music file to play using the cursor buttons, and press ENTER or ► to start playback.
   - If "No Item" is displayed, check whether the network is properly connected.



Controlling Remote Playback from a PC

You can use this unit to play music files stored on your PC by operating the PC inside your home network. This unit is capable of remote playback via Windows Media Player 12. To use the remote playback function, you must first configure Windows Media Player 12.

- Using a DLNA-compatible controller (such as an Android application), you can select a music file stored on Windows Media Player 12 and stream to this unit by operating the controller. For information on how to remotely play using the controller, refer to the controller's instruction manual.

■ Configuration on PC

1. Turn on your PC and start Windows Media Player 12.
2. In the "Stream" menu, select "Turn on media streaming". A dialog box is displayed.
   - If media streaming is already turned on, select "More streaming options..." in the "Stream" menu to list players in the network.
     Proceed to step 4.
3. Click "Turn on media streaming". A list of players in the network is displayed.
4. Select this unit in "Media streaming options" and check that it is set to "Allow".
5. Click "OK" to close the dialog box.
6. Open the "Stream" menu and check that "Allow remote control of my Player..." is checked.

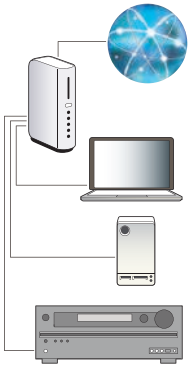
■ Remote playback

1. Turn on the power of the unit.
2. Turn on your PC and start Windows Media Player 12.
3. Select the music file to play with Windows Media Player 12 and right-click.
   - To remotely play a music file on another server, open the target server from "Other Libraries" and select the music file to play.
4. Select this unit in "Play to". The "Play to" window of Windows Media Player 12 opens and the music file starts playing on the unit.
   - Operations during remote playback are possible from the "Play to" window on the PC. The playback screen is displayed on the TV connected to the unit using HDMI cable. If your PC is running on Windows 8, click "Play to", and then select this unit.
5. Adjust the volume using the volume bar on the "Play to" window.
   - Some times, the volume displayed on the remote playback window may differ from that appeared on the display of the unit.
   - When the volume is adjusted from the unit, the value is not reflected in the "Play to" window.
   - This unit cannot play music files remotely in the following conditions.
     – It is using a network service.
     – It is playing a music file on a USB storage device.

Playing Music Files in a Shared Folder

Summary of Shared Folder

Shared folder is a folder which is placed on PC or NAS device (a hard disk connected to your network) and made accessible to multiple users on a network.
You can play music files in a shared folder on the PC or NAS device connected to the same network as the unit. To play music files in a shared folder, you must first configure Windows 8 or Windows 7, Make sure the unit and PC or NAS device are connected to the same router.



- The sharing options must be configured and a shared folder created on the PC in advance.
- For information on how to configure the NAS device and create a shared folder, refer to the NAS device's instruction manual.

Configuration of PC

■ Configuring the Sharing Options

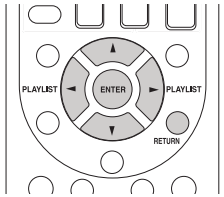
1. Select "Choose Home group and Sharing Options" on the "Control Panel".
   - If the menu is not displayed, check whether "View by" is set to "Category".
2. Select "Change advanced sharing settings".
3. Check whether the following radio buttons are selected in "Home or Work":
   "Enable network discovery"
   "Turn on file and printer sharing"
   "Turn on sharing so anyone with network access can read and write files in the Public folders"
   "Turn off password protected sharing"
4. Select "Save Changes" and click "OK" on the dialog box.

■ Creating a Shared Folder

1. Select the folder to share and right-click.
2. Select "Properties".
3. Select "Advanced Sharing" on the "Sharing" tab.
4. Select the "Share this folder" check box and click "OK".
5. Select "Share" for "Network File and Folder Sharing".
6. Select "Everyone" from the pull-down menu. Click "Add", and then "Share".
   - To set user name and password to a shared folder, set "Permissions" in "Advanced Sharing" on the "Sharing" tab.
   - Check whether a workgroup is set.

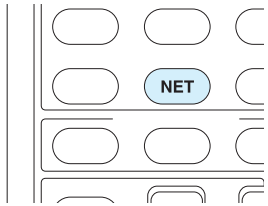
Playback of Shared Folder Contents

● **Operation**: You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN.

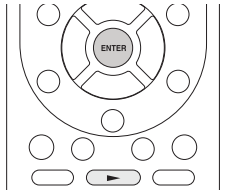


■ Playback

1. Press NET on the remote controller. The NET screen is displayed and the "NET" indicator lights on the display.
   - If the "NET" flashes, the AV receiver is not properly connected to the network. When using a wired LAN connection, check the Ethernet cable connection, and when using a wireless LAN connection, check whether the "Wi-Fi" indicator on the left side of the AV receiver is lit.



2. With the cursor buttons, select "Home Media", and then press ENTER.
3. With the cursor buttons, select the target server, and then press ENTER.
   - You can check the server name of your computer from the computer properties.
4. With the cursor buttons, select the target shared folder, and then press ENTER.
5. If a username and password is required, enter the necessary login information.
   - The login information is the account information set at the time of creating the shared folder.
   - Once entered, the login information will be remembered from the next time onward.
6. Select a music file to play using the cursor buttons, and press ENTER or ► to start playback.



Operating Music Files with the Remote Controller

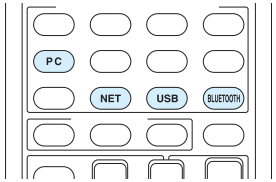
Summary of Operation on Remote Controller

The remote controller of this unit allows you to operate and/or play music files stored on USB storage devices, Internet radio, PC and NAS devices on your network, as well as on Bluetooth-enabled devices.

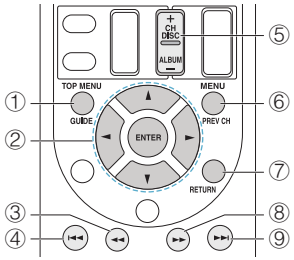
- Available buttons may vary depending on the service and device to play.
- Some buttons cannot be used with Bluetooth-enabled devices. Furthermore, the Bluetooth-enabled devices must support the AVRCP profile. Some devices may not be operated, even when they support AVRCP profile.

Functions of the Buttons of the Remote Controller

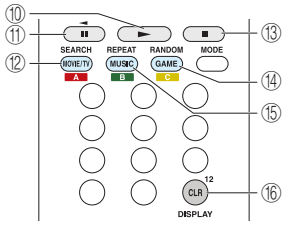
1. Press any of the INPUT SELECTOR button (PC, NET, USB or BLUETOOTH) accordingly to input source.



2. Operate the remote controller by referring to the name and function of each of the buttons.



① **TOP MENU**: This button displays the top menu for each media or server.
② **▲/▼, ENTER**: These buttons navigate through items and activate the selected item.
◄/►: These buttons cycle through pages.
③ **◄◄**: This button fast-reverses the current track. This button is not operable from 10 seconds before the playback ends.
④ **I◄◄**: This button plays the current track from the beginning. Pressing this button twice plays the previous track.
⑤ **CH +/- button**: Moves the cursor on the Internet radio stations list in "My Favorites".
⑥ **MENU**: This button displays the menu of each Internet radio service.
⑦ **RETURN**: This button returns to the previous screen.
⑧ **►►**: This button fast-forwards the current track. This button is not operable from 10 seconds before the playback ends.
⑨ **►►I**: This button plays the next track.



⑩ **►**: This button starts the playback.
⑪ **❚❚**: This button pauses the playback.
⑫ **SEARCH**: This button toggles between the playback screen and list screen during playback.
⑬ **■**: This button stops the playback.
⑭ **RANDOM**: This button performs random playback.
⑮ **REPEAT**: This button replays the track (or tracks). Pressing this button repeatedly cycles through the repeat modes.
⑯ **DISPLAY**: This button changes the displayed track information during playback. Pressing this button when the list screen is displayed toggles the screen to playback.

- Bluetooth-enabled devices: Usable buttons are **►**, **I◄◄**, **◄◄**, **❚❚**, **►►**, **►►I**, and **■**.

Icons Displayed During Playback

Icons are displayed on the display during music file playback. The meaning of each icon is as follows:

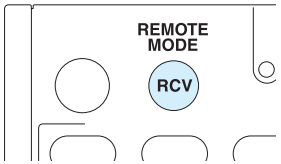
: Folder
: Track
: Play
: Pause
: Fast-forward
: Fast-reverse
: Artist
: Album
: Repeat One Track
: Repeat within a folder
: Repeat
: Shuffle

Using the Listening Modes

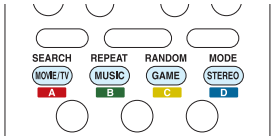
Selecting the Listening Mode

The listening modes allow you to select the best sound effect for your input source.

1. Press RCV on the remote controller. Always press RCV first to change the remote controller to RECEIVER mode (the mode to operate this unit) since its mode may be changed to operate another components.



2. Select the desired listening mode. The listening mode changes each time you press one of the buttons below on the remote controller. Set the listening mode of your choice by listening to the actual sound.
   For details and types of listening modes, see "Contents of the Listening Modes".



■ MOVIE/TV

You can select a listening mode suitable for movies and TV programs.

- Selectable listening modes:
  All Ch Stereo
  Direct
  Dolby D
  Dolby D+
  Dolby TrueHD
  DSD
  DTS
  DTS 96/24
  DTS Express
  DTS-HD HR
  DTS-HD MSTR
  Full Mono
  Mono
  Multichannel
  Neo:6 Cinema
  PLII Movie
  T-D
  TV Logic

■ MUSIC

You can select a listening mode suitable for music.

- Selectable listening modes:
  All Ch Stereo
  Direct
  Dolby D
  Dolby D+
  Dolby TrueHD
  DSD
  DTS
  DTS 96/24
  DTS Express
  DTS-HD HR
  DTS-HD MSTR
  Full Mono
  Multichannel
  Neo:6 Music
  Orchestra
  PLII Music
  Pure Audio
  Stereo
  Studio-Mix
  Unplugged

■ GAME

You can select a listening mode suitable for video games.

- Selectable listening modes:
  All Ch Stereo
  Direct
  Dolby D
  Dolby D+
  Dolby TrueHD
  DSD
  DTS
  DTS 96/24
  DTS Express
  DTS-HD HR
  DTS-HD MSTR
  Full Mono
  Game-Action
  Game-Rock
  Game-RPG
  Game-Sports
  Multichannel
  PLII Game
  T-D

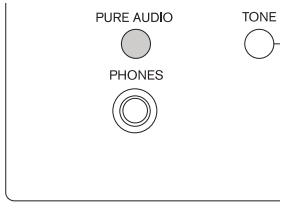
■ STEREO

You can select a listening mode for stereo and all channel stereo sources.

- Selectable listening modes:
  All Ch Stereo
  Stereo

■ PURE AUDIO button (on the unit only) (European, Australian and Asian models)

The display and analog video circuit is cut off to switch the unit to PURE AUDIO mode and provide purer sound. Selecting this mode lights the PURE AUDIO indicator on the unit. Pressing the button again reselects the previous listening mode.



- Selecting Pure Audio for listening mode turns off the unit's display and analog video circuitry, and only the video signals input through HDMI input are output from HDMI output.

Contents of the Listening Modes

Selectable listening modes will differ depending on the number of input source channels and the actual speaker configuration. Listening modes available when headphones are connected are: Pure Audio (European, Australian and Asian models), Mono, Direct, and Stereo.

Lists in alphabetic order (A-Z)

■ All Ch Stereo

Ideal for background music, this mode fills the entire listening area with stereo sound from the front, surround, and surround back speakers.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch

■ Direct

In this mode, audio from the input source is output as-is. For example, if a 2 ch source from a music CD is input, the output will be stereo, or if Dolby Digital signal is input, the sound field will be controlled corresponding to the number of channels present.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 2.1 ch, 3.1 ch, 5.1 ch

■ Dolby D (Dolby Digital)

This mode is for use with Dolby Digital sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).

■ Dolby D + (Dolby Digital Plus)

This mode is for use with Dolby Digital Plus sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).
- When playing back 5.1 ch sources from Blu-ray Discs, Dolby Digital is automatically applied.

■ Dolby Pro Logic II

This mode expands any 2 ch source for 5.1 ch multichannel surround playback. It provides a very natural and seamless surround-sound experience, keeping the sound clear. As well as music and movies, video games can also benefit from the dramatic spatial effects and vivid imaging.

PLII Movie: Use this mode with any 2 ch movie.
PLII Music: Use this mode with any 2 ch music source.
PLII Game: Use this mode with any 2 ch game source.

- Input source: Stereo
- Speaker configuration: 3.1 ch, 5.1 ch
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).

■ Dolby TrueHD

This mode is for use with Dolby TrueHD sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).

■ DSD

This mode is for use with DSD sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- This unit supports DSD signals input through HDMI IN. However, depending on the connected player, better sound is possible when output from the PCM output of the player. In that case, configure the player for PCM output.
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).

■ DTS

This mode is for use with DTS sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).

■ DTS 96/24

This mode is for use with DTS 96/24 sources. The audio from the input source is output as-is, without surround sound processing. With 96 kHz sampling rate and 24-bit resolution, it provides superior fidelity.

- Input source: 5.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- Depending on the settings, this listening mode becomes DTS.
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).

■ DTS Express

This mode is for use with DTS Express sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).

■ DTS-HD HR (DTS-HD High Resolution Audio)

This mode is for use with DTS-HD High Resolution Audio sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).

■ DTS-HD MSTR (DTS-HD Master Audio)

This mode is for use with DTS-HD Master Audio sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).

■ DTS Neo:6

This mode expands any 2 ch source for 5.1 ch multichannel surround playback. It offers full-bandwidth on all channels, with great independence between the channels. There are two variants for this mode: one ideal for movies and another ideal for music.

Neo:6 Cinema: Use this mode with any 2 ch movie.
Neo:6 Music: Use this mode with any 2 ch music source.

- Input source: Stereo
- Speaker configuration: 3.1 ch, 5.1 ch
- This mode can only be selected if your Blu-ray Disc/ DVD player is connected to the unit with a digital audio connection (COAXIAL, OPTICAL, or HDMI).

■ Full Mono

In this mode, all speakers output the same sound in mono, so the sound you hear is the same regardless of where you are within the listening room.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch

■ Game-Action

In this mode, sound localization is distinct with emphasis on bass.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ Game-Rock

In this mode, sound pressure is emphasized to heighten live feel.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ Game-RPG

In this mode, the sound has a dramatic feel with a similar atmosphere to Orchestra mode.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ Game-Sports

Suitable for audio source with much reverberation.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ Mono

Use this mode when watching an old movie with a mono soundtrack, or use it to separately reproduce soundtracks in two different languages recorded in the left and right channels of some movies. It is also suitable for DVDs or other sources containing multiplexed audio.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 2.1 ch, 3.1 ch, 5.1 ch

■ Multichannel

This mode is for use with PCM multichannel sources. The audio from the input source is output as-is, without surround sound processing.

- Input source: 5.1 ch, 7.1 ch
- Speaker configuration: 3.1 ch, 5.1 ch

■ Orchestra

Suitable for classical or operatic music, This mode emphasizes the surround channels in order to widen the stereo image, and simulates the natural reverberation of a large hall.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ Pure Audio (European, Australian and Asian models)

This mode reproduces the original sound accurately. The audio from the input source is output as-is, without surround sound processing. The display and video circuitry are turned off and possible noise sources are minimized for a realistic audio reproduction.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 2.1 ch, 3.1 ch, 5.1 ch
- This mode cannot be selected when Zone 2 is active. Activating Zone 2 when this mode is selected, automatically switches the listening mode to Direct.

■ Stereo

In this mode, sound is output from the front left and right speakers and subwoofer.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 2.1 ch, 3.1 ch, 5.1 ch

■ Studio-Mix

Suitable for rock or pop music, Listening to music in this mode creates a lively sound field with a powerful acoustic image, like being at a club or rock concert.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

■ T-D (Theater-Dimensional)

T-D (Theater-Dimensional): In this mode, you can enjoy a virtual playback of multichannel surround sound even with only two or three speakers. This works by controlling how sounds reach the listener's left and right ears.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 2.1 ch, 3.1 ch, 5.1 ch
- Good results may not be possible if there is too much reverb, so we recommend that you use this mode in an environment with little or no natural reverb.

■ TV Logic

Suitable for TV shows produced in a TV studio, This mode enhances the surround effects to the entire sound to give clarity to voices and create a realistic acoustic image.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

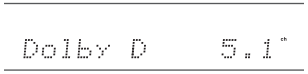
■ Unplugged

Suitable for acoustic instruments, vocals and jazz. This mode emphasizes the front stereo image, giving the impression of being right in front of the stage.

- Input source: Monaural, Stereo, 5.1 ch, 7.1 ch
- Speaker configuration: 5.1 ch

Checking the Input Source

You can check the audio format of the input signals. While audio from the player is being input, press DISPLAY on the remote controller several times to switch the information shown on the main unit display. If "Dolby D 5.1" is displayed in Signal format, the Dolby Digital 5.1 ch signals are being input.

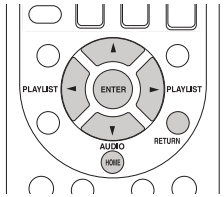


Advanced Settings

Setup Procedure

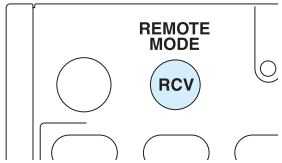
This unit allows you to configure advanced settings, such as to reassign the input jacks and input selector, or configure various speaker settings.
To configure advanced settings, select "Setup" in the Home menu.

● **Operation**: You can set up by viewing the guidance displayed on the TV screen. To display the guidance, you need to make HDMI connection between the unit and TV. Select the item with the cursor buttons of the remote controller and press ENTER to confirm your selection. To return to the previous screen, press RETURN. To return to the Home menu, press HOME.

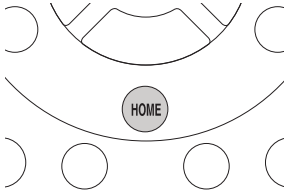


■ Operation

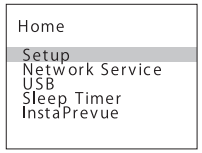
1. Press RCV on the remote controller. Always press RCV first to change the remote controller to RECEIVER mode (the mode to operate this unit) since its mode may be changed to operate another components.



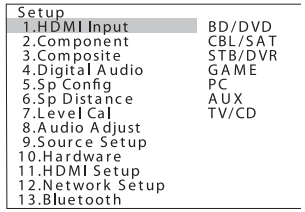
2. Press HOME. The Home menu is displayed on the TV screen. The Home menu is also displayed when HOME on the unit is pressed.



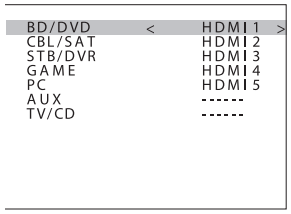
3. Select "Setup" using the cursor buttons and press ENTER.



4. Select the target menu using the cursors buttons ▲/▼ and then press ENTER.



5. Press ▲/▼/◄/► to select the desired item to configure the settings.
   - When "ENTER" is displayed on the setting item, press ENTER.



To save changes and finish the setting: Press HOME to exit.

1. HDMI Input

It is possible to change assignment of input selector buttons and the HDMI IN jacks.

Setting Item	Default Value	Setting Details
BD/DVD	HDMI 1	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to BD/DVD button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
CBL/SAT	HDMI 2	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to CBL/SAT button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
STB/DVR	HDMI 3	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to STB/DVR button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
GAME	HDMI 4	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to GAME button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
PC	HDMI 5	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to PC button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
AUX	-----	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to AUX button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.
TV/CD	-----	"HDMI 1" to "HDMI 6": Desired HDMI IN jack can be assigned to TV/CD button. If you do not assign a jack, select "-----". To select an HDMI IN jack already assigned to another input selector, change its setting to "-----" first.

2. Component (Component Video Input)

CBL/SAT button is assigned to COMPONENT VIDEO IN jack as factory default setting. This assignment can be changed if necessary. If you do not assign a jack, select "-----".

Setting Item	Default Value	Setting Details
BD/DVD	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to BD/DVD button.
CBL/SAT	COMPONENT	"COMPONENT": COMPONENT VIDEO IN jack is assigned to CBL/SAT button.
STB/DVR	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to STB/DVR button.
GAME	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to GAME button.
PC	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to PC button.
AUX	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to AUX button.
TV/CD	-----	"COMPONENT": COMPONENT VIDEO IN jack is assigned to TV/CD button.

3. Composite (Composite Video Input)

It is possible to change assignment of input selector buttons and the COMPOSITE VIDEO IN V1 to 3 jacks.

Setting Item	Default Value	Setting Details
BD/DVD	-----	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to BD/DVD button. If you do not assign a jack, select "-----".
CBL/SAT	VIDEO 1	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to CBL/SAT button. If you do not assign a jack, select "-----".
STB/DVR	VIDEO 2	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to STB/DVR button. If you do not assign a jack, select "-----".
GAME	VIDEO 3	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to GAME button. If you do not assign a jack, select "-----".
PC	-----	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to PC button. If you do not assign a jack, select "-----".
AUX	FRONT	You cannot change this setting.
TV/CD	-----	"VIDEO 1" to "VIDEO 3": Desired COMPOSITE VIDEO IN jack can be assigned to TV/CD button. If you do not assign a jack, select "-----".

4. Digital Audio (Digital Audio Input)

It is possible to change assignment of input selector buttons and the DIGITAL IN COAXIAL 1 to 2/OPTICAL jacks.

Setting Item	Default Value	Setting Details
BD/DVD	COAXIAL 1	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to BD/DVD button. If you do not assign a jack, select "-----".
CBL/SAT	COAXIAL 2	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to CBL/SAT button. If you do not assign a jack, select "-----".
STB/DVR	-----	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to STB/DVR button. If you do not assign a jack, select "-----".
GAME	-----	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to GAME button. If you do not assign a jack, select "-----".
PC	-----	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to PC button. If you do not assign a jack, select "-----".
AUX	-----	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to AUX button. If you do not assign a jack, select "-----".
TV/CD	OPTICAL	"COAXIAL 1", "COAXIAL 2", "OPTICAL": Desired DIGITAL IN jack can be assigned to TV/CD button. If you do not assign a jack, select "-----".

- Supported sampling rates for PCM signals (stereo, mono) from a digital input (optical and coaxial) are 32/44.1/48/88.2/96 kHz/16, 20, 24 bit.

5. Sp Config (Speaker Configuration)

Allows you to change the speaker configuration such as existence of subwoofer, crossover frequency, and so on. Settings are automatically configured if you use the Automatic Speaker Setup.

Setting Item	Default Value	Setting Details
Subwoofer	Yes	Set whether a subwoofer is connected or not. "Yes": When subwoofer is connected "No": When subwoofer is not connected
Front	Small	Allows you to specify the size of the front speakers. Specify the size according to a cone diameter. "Small": When the cone diameter is less than 6-1/2 inches (16 cm) "Large": When the cone diameter is greater than 6-1/2 inches (16 cm) • The setting is fixed to "Off" if "Subwoofer" is set to "No".

Setting Item	Default Value	Setting Details
Center	Small	Allows you to specify the size of the center speaker and surround speakers. Specify the size in accordance with the smallest cone diameter in the system. "Small": When the cone diameter is less than 6-1/2 inches (16 cm) "Large": When the cone diameter is greater than 6-1/2 inches (16 cm) "None": When the corresponding speaker is not used. • The setting cannot be selected "Large" if "Front" is set to "Small".
Surround	Small	Allows you to specify the size of the center speaker and surround speakers. Specify the size in accordance with the smallest cone diameter in the system. "Small": When the cone diameter is less than 6-1/2 inches (16 cm) "Large": When the cone diameter is greater than 6-1/2 inches (16 cm) "None": When the corresponding speaker is not used. • The setting cannot be selected "Large" if "Front" is set to "Small".
Crossover	100 Hz	Allows you to set the lowest frequency range for each speaker output, and make the subwoofer output the lower frequency range than the set value. Specify the size in accordance with the smallest cone diameter in the system. "40 Hz", "50 Hz", "60 Hz": For cone diameters greater than 8 inches (20 cm) "70 Hz", "80 Hz" "90 Hz": For cone diameters 6-1/2 to 8 inches (16 to 20 cm) "100 Hz": For cone diameters 5-1/4 to 6-1/2 inches (13 to 16 cm) "120 Hz": For cone diameters 3-1/2 to 5-1/2 inches (9 to 13 cm) "150 Hz", "200 Hz": For cone diameters less than 3-1/2 inches (9 cm)
Double Bass	Off	This function boosts bass output by feeding bass sounds from the front left and right, and center speakers to the subwoofer. "On": To boost the bass output "Off": Not to boost the bass output • The setting is fixed to "Off" if "Subwoofer" is set to "No" and "Front" is set to "Small".

- In the following cases, the settings for "Sp Config" cannot be changed:
  - Headphones are connected.
  - "Audio TV Out" is set to "On".
  - “HDMI CEC (RIHD)” is set to “On” and you’re listening through your TV speakers.

6. Sp Distance (Speaker Distance)

Allows you to set the distance from each speaker to the listening position. Settings are automatically configured if you use the Automatic Speaker Setup.

Setting Item	Default Value	Setting Details
Unit	feet/meters	Specify the unit of distance for configuring settings. "Feet": When setting in feet (0.1 ft to 30.0 ft, in increments of 1.0 ft) "meters": When setting in meters (0.03 m to 9.00 m, in increments of 0.03 m)
Front Left	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.
Center	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.
Front Right	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.
Surround Right	7.0 ft/2.10 m	Specify the distance between each speaker and the listening position.
Surround Left	7.0 ft/2.10 m	Specify the distance between each speaker and the listening position.
Subwoofer	12.0 ft/3.60 m	Specify the distance between each speaker and the listening position.

- In the following cases, the settings for "Sp Distance" cannot be changed:
  - Headphones are connected.
  - "Audio TV Out" is set to "On".
  - Speakers for which "Sp Config" are set to "No" or "None".
  - "HDMI CEC (RIHD)" is set to "On" and you’re listening through your TV speakers.
- Default values vary depending on the regions.

7. Level Cal (Level Calibration)

Allows you to adjust the level of each speaker with the built-in test tone. Settings are automatically configured if you use the Automatic Speaker Setup.

Setting Item	Default Value	Setting Details
Front Left	0 dB	Select a value between "-12 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.
Center	0 dB	Select a value between "-12 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.
Front Right	0 dB	Select a value between "-12 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.
Surround Right	0 dB	Select a value between "-12 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.
Surround Left	0 dB	Select a value between "-12 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.
Subwoofer	0 dB	Select a value between "-15 dB" and "+12 dB". Select the desired volume level accordingly to the test tone which is output as you change the value.

- In the following cases, the settings for "Level Cal" cannot be changed:
  - Headphones are connected.
  - "Audio TV Out" is set to "On".
  - Speakers for which "Sp Config" are set to "No" or "None".
  - Mute (MUTING) is set.
  - “HDMI CEC (RIHD)” is set to “On” and you’re listening through your TV speakers.

8. Audio Adjust

Allows you to configure various settings related to sound, such as settings for listening to multiplex audio or multilingual TV broadcasts and sound field settings for listening modes.

Setting item	Default Value	Setting Details
Input Ch (Mux) (Multiplex Input Channel)	Main	Set the audio channel or language to output when listening to multiplex audio or multilingual TV broadcasts etc. "Main": When playing primary audio channel. "Sub": When playing secondary audio channel. "Main/Sub": When playing both primary and secondary audio channel.
Input Ch (Mono) (Mono Input Channel)	Left + Right	Allows you to set the input channel to use for playing any 2 ch digital source such as Dolby Digital, or 2-ch analog/PCM source in the Mono listening mode. "Left": When playing left channel source only. "Right": When playing right channel source only. "Left + Right": When playing both left and right channel source only.
Panorama (PLII Panorama)	Off	Configure the sound field settings for playing any 2 ch digital source such as Dolby Digital, or 2-ch analog/PCM source in the Dolby Prologic II Music listening mode. Allows you to configure the sound field width of front stereo image. "On": To broaden the width of the front stereo image "Off": Default value.
Dimension (PLII Dimension)	0	Configure the sound field settings for playing any 2 ch digital source such as Dolby Digital, or 2-ch analog/PCM source in the Dolby Prologic II Music listening mode. Allows you to configure the sound field position forward or backward. "-3" to "3": With "0" at the center, smaller the setting value is, more the sound field moves forward, and larger the setting value is, more the sound field moves backward.

Setting item	Default Value	Setting Details
Center Width (PLII Center Width)	3	Configure the settings to use for playing any 2 ch digital source such as Dolby Digital, or 2-ch analog/PCM source in the Dolby Prologic II Music listening mode. Allows you to configure the width of the sound from the center speaker. "0" to "7": Smaller the setting value is,the sound is gathered to the center, and larger the setting value is, the sound is distributed to the front left and right speakers.
Center Image (Neo:6 Center Image)	2	Allows you to configure the width of the front sound field when playing in the DTS Neo:6 Music listening mode. "0" to "5": Smaller the setting value is, the front sound field is gathered to the center, and larger the setting value is, the front sound field is distributed to the front left and right speakers.
Listening Angle	Wide	Set the angle of the front left and right speakers relative to the listening position when playing in the Theater-Dimensional listening mode. "Narrow": Less than 30° "Wide": Greater than 30°

- Values recommended for "Listening Angle" are 20° when "Narrow" is selected, and 40° when "Wide" is selected.

9. Source Setup

The setting can be separately set to each input selector button. Select the input selector to configure.

Setting Item	Default Value	Setting Details
AccuEQ	Off	Allows you to disable or enable the sound field correction set on automatic speaker setup. "On": Enable this function "Off": Disable this function In the following cases, the settings cannot be changed: • Automatic Speaker Setup is not being performed. • Headphones are connected.
Name	-	Allows you to rename the currently selected input selector for easy identification. • Same name cannot be set for multiple input selectors. Moreover, a name cannot be configured for the input selectors "AM", "FM", "NET", "USB", and "BLUETOOTH".

Setting Item	Default Value	Setting Details
Audio Selector	-	Allows you to select prior input source. "ARC": When giving priority to input signal from ARC compatible TV. • This setting can be selected when "Audio Return Channel" is set to "Auto" and when “TV/CD” is selected. "HDMI": When giving priority to input signal from HDMI jacks. • This setting can be selected only when the input selector to set is assigned to the HDMI IN jack in the "HDMI Input" setting. "COAXIAL" (Coaxial input): When giving priority to input signal from DIGITAL IN COAXIAL jacks. • This setting can be selected only when the input selector to set is assigned to the COAXIAL jack in the "Digital Audio Input (Digital Audio Input)" setting. "OPTICAL" (Optical input): When giving priority to input signal from DIGITAL IN OPTICAL jack. • This setting can be selected only when the input selector to set is assigned to the OPTICAL jack in the "Digital Audio Input (Digital Audio Input)" setting. "Analog": To always output analog audio independently of the input signal.
Fixed Mode	Off	Specify an input signal when "HDMI", "COAXIAL", or "OPTICAL" is selected for "Audio Selector". Set this item if noise is produced, or truncation occurs at the beginning of a track that follows a gap when playing PCM or DTS sources. "Off": To play an analog signal when there is no digital signal. "PCM": To fix the input source to PCM. "DTS": To fix the input source to DTS (except for DTS-HD). • Changing "Audio Selector" setting changes "Fixed Mode" to "Off".

- In the following cases, the settings for "Source Setup" cannot be changed:
  - Automatic Speaker Setup is not being performed.
  - When selecting the input selectors “AM” “FM” “NET” “USB” “BLUETOOTH”.

10. Hardware (Hardware Setup)

Setting item	Default Value	Setting Details
Volume OSD	On	This function displays the volume level on the TV screen during volume level adjustment. "On": The volume level is displayed on TV screen. "Off": The volume level is not displayed on TV screen.
Remote ID	1	Select an ID for the remote controller to be used with the unit from "1", "2", and "3", and set it to differentiate this unit's remote controller from those used with other Onkyo components when multiple components are used in the same room. If you change the ID on the unit, set the remote controller ID to the same value accordingly to the procedure below. 1. While holding down RCV, press Q SETUP for about 3 seconds until the remote indicator lights. 2. Press either 1, 2, or 3 using the number buttons. The remote indicator flashes twice.
AM/FM Freq Step (North American and Taiwanese models)	10 kHz/ 200 kHz	Select the frequency step according to your area. Select from "10 kHz/200 kHz" or "9 kHz/50 kHz". • When the "AM/FM Frequency Step (AM Frequency Step)" setting is changed, all radio presets are deleted.
AM/FM Freq Step (European, Australian and Asian models)	9 kHz	Select the frequency step according to your area. Select from "10 kHz/200 kHz" or "9 kHz/50 kHz". • When the "AM/FM Frequency Step (AM Frequency Step)" setting is changed, all radio presets are deleted.

Setting item	Default Value	Setting Details
Auto Standby	On/Off	This function places the unit on standby automatically after 20 minutes of inactivity without any video and/or audio input. "On": To place the unit on standby automatically. ("ASP" flashes on the display.) "Off": Not to place the unit on standby automatically, • "Auto Standby" is appeared on the display and menu screen 30 seconds before the Auto Standby comes on. • "Auto Standby" does not work when Zone 2 is active. • Default values vary depending on the regions.
HDMI Through	Off	Enables/Disables the "Auto Standby" setting when "HDMI Through" setting is on. "On": Enable this function "Off": Disable this function • This setting is fixed to On when setting "Auto Standby" to "Off".
Update Notice	Enable	This function notifies the availability of a firmware update via network. "Enable": Notify updates "Disable": Do not notify updates • Refer to "Updating the Firmware" for details.
Version	-	The current firmware version is displayed.
Update via NET	-	Press ENTER to select when you want to update the firmware via network. • You will not be able to select "Update via NET" if you do not have Internet access or there is nothing to update.
Update via USB	-	Press ENTER to select when you want to update the firmware via USB. • You will not be able to select "Update via USB" if a USB storage device is not connected or there is nothing to update in the USB storage device.

11. HDMI Setup

Setting Item	Default Value	Setting Details
HDMI CEC (RIHD)	Off	Setting to "On" enables the input selection link and other link functions with HDMI connected CEC compliant device. "Off": When not using this function. • Depending on the TV set, a link may need to be configured on the TV. • When this setting is set to "On", closing the on-screen menu displays the name of the CEC-compatible devices and "RIHD On" on the display. • When this setting is set to "On", power consumption in standby mode may increase. (Depending on the TV status, the unit will enter the normal standby mode.) • When this setting is set to "On" and you are listening to the audio through the speakers of your TV, operating the MASTER VOLUME control of the unit outputs audio from the speakers connected to the unit. If you want to output audio from either of the unit or TV, change the unit or TV settings, or reduce the volume of the unit. • If misbehavior occurs when this setting is set to "On", set this setting to "Off". • When connecting a non-CEC compatible component, or when you are not sure whether it is compatible, set the setting to "Off". • When making the change to this setting, turn off and then on again the power of all connected components.

Setting Item	Default Value	Setting Details
HDMI Through	Off	Allows video signals from an AV component connected via HDMI to be output to the TV independently of whether the AV receiver is on standby. This setting is only valid for INPUT SELECTOR buttons assigned to HDMI IN jack. You cannot set this setting to INPUT SELECTOR button which is not assigned to any HDMI IN jack. "Off": To disable this function. The input signal from any HDMI IN jacks cannot be output to TV. "BD/DVD", "CBL/SAT", "STB/DVR", "GAME", "PC", "AUX", "TV/CD": Input signal from components connected to the HDMI IN jack assigned to each input selector is output to TV. "Last": Input signal from the components connected to input selector which was selected just before the unit enters the standby. "AUTO": Input signal from all components connected to HDMI IN jacks is displayed on TV. "Auto (Eco)": Input signal from all components connected to HDMI IN jacks is displayed on TV. Selecting this setting when using CEC-compatible TV, the power consumption on standby is reduced. You cannot select this setting, when "HDMI CEC (RIHD)" is set to "Off". • When "HDMI Through" is set, the power consumption increases even when the unit is on standby. However, the increase in power consumption is kept to a minimum by automatically entering the HYBRID STANDBY mode, where only the essential circuit is operating. • When making the change to this setting, turn off and then on again the power of all connected components.

Setting Item	Default Value	Setting Details
Audio TV Out	Off	This function outputs the audio through the speakers of the TV connected to HDMI with this unit turned on. "On": When using this function "Off": When not using this function. • When setting this function to "On", set "HDMI CEC (RIHD)" to "Off". • This function is fixed to "Auto", when setting "HDMI CEC (RIHD)" to "On". • Listening mode cannot be changed while "Audio TV Out" is set to "On" and audio is being output through the speakers of the TV. • Depending on your TV set or input signal of the component, audio may not output through the speakers of the TV even if "Audio TV Out" is set to "On". In such case, audio is output from the speakers of the unit. • Operating the MASTER VOLUME control of the unit when "Audio TV Out" or "HDMI CEC (RIHD)" is set to "On" and you are listening to the audio through the speakers of your TV, outputs audio from the unit. If you do not want to output audio from the unit, change the unit or TV settings, or reduce the volume of the unit.
Audio Return Ch	-	Connection to the ARC compatible TV using HDMI cable allows to listen to the TV sound from the speakers connected to the unit. To use this function, set "HDMI CEC (RIHD)" to "On" in advance. "Auto": When using this function. "Off": When not using this funtion.
LipSync	On	This function automatically corrects any desynchronization between the video and audio signals based on data from the HDMI LipSync compatible TV. "On": When using this function. "Off": When not using this function.

Setting Item	Default Value	Setting Details
InstaPrevue	-	This function is related to the preview thumbnails of the video input through HDMI, which will be displayed using "InstaPrevue" in the Home menu. • Depending on the video source, the preview thumbnails configured in "InstaPrevue" may not be displayed properly.
Sub Window	Multi	Allows you to set how to display preview thumbnails. "Multi": Displays all the thumbnails of HDMI IN 1, 2, 3, 4 and 5 at once. "Single": Displays thumbnails of HDMI IN 1, 2, 3, 4 and 5 individually.
Position	Bottom/LowerR	Allows you to set the display position of preview thumbnails. When setting "Sub Window" to "Multi": Select from "Top", "Bottom", "Left" and "Right". When setting "Sub Window" to "Single": Select from "UpperL", "UpperR", "LowerL" and "LowerR".

12. Network Setup

Make the network setting.

- When LAN is configured with a DHCP, set "DHCP" to "Enable" to configure the setting automatically. ("Enable" is set by default) To assign fixed IP addresses to each component, you must set "DHCP" to "Disable" and assign an address to this unit in "IP Address" as well as set information related to your LAN, such as Subnet Mask and Gateway.

Setting Item	Default Value	Setting Details
Network Standby	Off	This function allows you to turn on the power of the AV receiver via network using an application such as Onkyo Remote. "On": When using this function "Off": When not using this function. • When "Network Standby" is used, the power consumption increases even when the AV receiver is on standby. However, the increase in power consumption is kept to a minimum by automatically entering the HYBRID STANDBY mode, where only the essential circuit is operating.
Wi-Fi	Off	Allows you to connect the unit to Internet via wireless LAN router. "On": Wireless LAN connection "OFF": Wired LAN connection
Wi-Fi Setup	-	Allows you to configure wireless LAN settings by pressing ENTER when "Start" is displayed.
Wi-Fi Status	-	Displays the information of the connected access point as follows. "SSID": SSID of the connected access point. "Security": Security method of the connected access point. "Signal": Signal strength of the connected access point. "SSID": SSID of the connected access point.
MAC Address	-	This is the MAC address of the AV receiver. This value is specific to the component and cannot be changed.

Setting Item	Default Value	Setting Details
DHCP	Enable	"Enable": Auto configuration by DHCP "Disable": Manual configuration without DHCP • If selecting "Disable", you must set "IP Address", "Subnet Mask", "Gateway", and "DNS Server" manually.
IP Address	-	Displays/Sets the IP address.
Subnet Mask	-	Displays/Sets the subnet mask.
Gateway	-	Displays/Sets the gateway.
DNS Server	-	Displays/Sets the primary DNS server.
Proxy URL	-	Displays/Sets the proxy server URL.
Proxy Port	-	Displays/Sets the proxy server port number when you enter "Proxy URL".
Network Check	-	Confirms the status of the network connection. Press ENTER when "Start" is displayed.

- Wait for a while if "12. Network Setup" is not shown on the screen. It will appear when the network is started up.

13. Bluetooth (Bluetooth Setup)

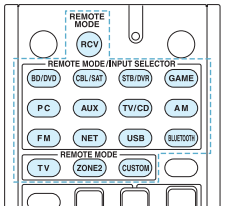
Setting Item	Default Value	Setting Details
Bluetooth	On	Enables/Disables the unit to pair with Bluetooth-enabled device. "On": Enables the Bluetooth function and allows the unit to pair with Bluetooth-enabled device. Set this function to "On" when configuring the settings related to Bluetooth. "Off": When not using the Bluetooth function.
Direct Change	On	Automatically changes the input selector to "BLUETOOTH" when a Bluetooth-enabled device is connected. "On": To enable this function. "Off": To disable this function. • When the input selector is not selected automatically, set this function to "Off" and change the input selector manually.
Auto Reconnect	On	Automatically reconnects to the Bluetooth-enabled device connected last when you change the input selector to "BLUETOOTH". "On": To enable this function. "Off": To disable this function. • This function may not work depending on your Bluetooth-enabled device.
Wakeup	Off	Automatically wakes up the unit when it is on standby by connecting a Bluetooth-enabled device. "On": To enable this function. "Off": To disable this function. • Setting this function to "On" increases the power consumption even when the AV receiver is on standby. However, the increase in power consumption is kept to a minimum by automatically entering the HYBRID STANDBY mode, where only the essential circuit is operating. • When "Direct Change" is set to "Off", "Wakeup" is fixed to "Off".
Pairing Info	-	This function initializes the information of a previous pairing information stored in the unit. Pressing ENTER when "Clear" is displayed initializes the pairing information stored in this unit. • This function does not initialize the pairing information on the Bluetooth-enabled device. When pairing the unit with the device again, be sure to clear the pairing information on the Bluetooth-enabled device in advance. For information on how to clear the pairing information, refer to the Bluetooth-enabled device's instruction manual.
Device	-	Displays the name of the Bluetooth-enabled device connected to the unit. • The name is not displayed when "Status" is "Ready" and "Pairing".

Setting Item	Default Value	Setting Details
Status	-	Displays the status of the Bluetooth-enabled device connected to the unit. "Ready": Not paired "Pairing": Paired "Connected": Connected successfully

Operating Other Components with the Remote Controller

Functions of Remote Mode Button

REMOTE MODE button on the remote controller has ability to control your other AV components, including those made by other manufacturers, by programming the specified remote control code. Program the desired REMOTE MODE button with remote control code and then press the programmed button. The remote controller's mode is changed to operate the corresponding component.



* The RCV and ZONE2 buttons cannot be programmed.

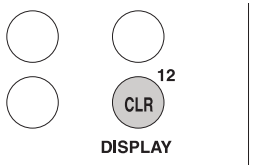
Programming Remote Control Codes

For information on the configuration and operation of Onkyo components with RI jack, refer to "Connecting and Operating Onkyo RI Components". Furthermore, the following REMOTE MODE buttons are preprogrammed with remote control codes.

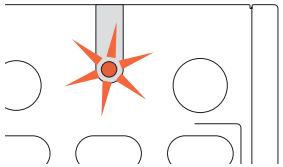
BD/DVD: Onkyo Blu-ray Disc/DVD player
TV/CD: Onkyo CD player
STB/DVR: Apple TV

■ Registration

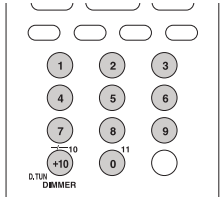
1. Look up the Remote Control Code List for the corresponding remote control code.
   - The codes in the Remote Control Code List are those known as of the date of publication and may be changed.
   - Only TV remote control codes can be entered for TV.
   - Program a remote control code in accordance with the input since each button also works as the input selector. (For example, when the CD player is connected to the TV/CD jack, program the remote control code for the CD player to TV/CD)
2. Press DISPLAY for 3 or more seconds while holding down the REMOTE MODE button to which you want to register the remote control code.



The remote indicator will light.



3. With the number buttons, enter the 5-digit remote control code within 30 seconds. The registration is complete when the remote indicator flashes twice.
   - The remote indicator flashes once when registration fails. In that case, try the registration again.

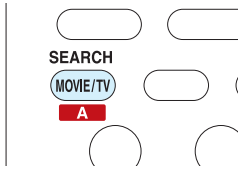


Remote Control Code List

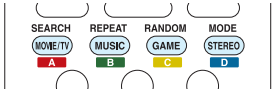
■ Remapping the Colored Buttons

The colored button assignment on the AV receiver's remote controller can be remapped to match that on the remote controller of the component whose remote control code you programmed to REMOTE MODE. However, you will not be able to remap the colored buttons if Zone 2 is selected.

1. Hold down the REMOTE MODE button to map and A (Red) simultaneously until the remote indicator lights (about 3 seconds).
   - Remapping is possible only for codes included in the categories of the Remote Control Code List such as DVD player and TV.



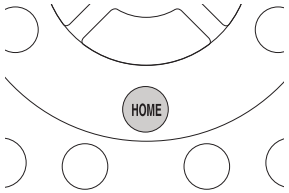
2. Within 30 seconds, press the colored buttons from left to right, in the order you want to remap. For example, if the colored buttons on the remote controller of the other component are yellow, green, blue, and red from left to right, press the buttons on the AV receiver's remote controller in that order. Programming is complete when the remote indicator flashes twice.
   - The remote indicator flashes once slowly when remapping fails. Try the remapping again.
   - Pressing any other button than a colored button cancels the remap operation.



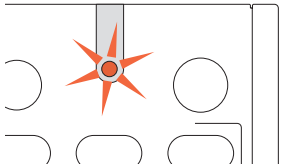
■ Resetting the REMOTE MODE Buttons

You can reset a REMOTE MODE button to its default remote control code. Note that only one REMOTE MODE button can be reset in this procedure.

1. Press HOME for 3 or more seconds while holding down the REMOTE MODE button to which you want to program the remote control code.



The remote indicator lights.

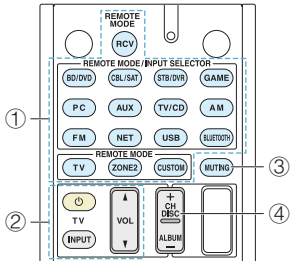


2. Within 30 seconds, press the REMOTE MODE button again. Reset is complete when the remote indicator flashes twice.

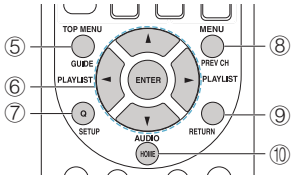
To reset the remote controller to its factory defaults: While holding down RCV, press and hold down HOME for about 3 seconds until the remote indicator lights. Press RCV again within 30 seconds. Reset is complete if the remote indicator flashes twice.

TV operation

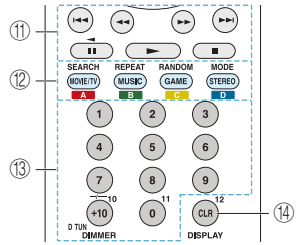
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



① REMOTE MODE
② ⏻, INPUT, VOL ▲/▼
③ MUTING
④ CH +/–



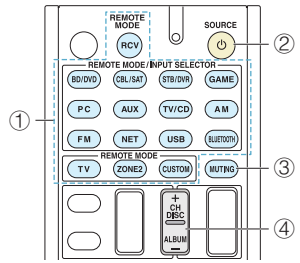
⑤ GUIDE
⑥ ▲/▼/◄/►, ENTER
⑦ SETUP
⑧ PREV CH
⑨ RETURN
⑩ AUDIO (∗)



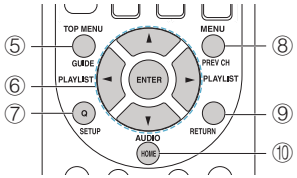
⑪ ►, ❚❚, ■, ◄◄, ►►, ⏮, ⏭ (∗)
⑫ A (Red) (∗), B (Green) (∗), C (Yellow) (∗), D (Blue) (∗)
⑬ Number 1~9, 0, +10
⑭ CLR, DISPLAY
∗ Not CEC-compatible.

Blu-ray Disc player/DVD player/DVD recorder operation

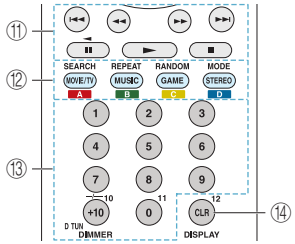
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



① REMOTE MODE
② ⏻SOURCE
③ MUTING
④ CH +/–, DISC +/–



⑤ TOP MENU
⑥ ▲/▼/◄/►, ENTER
⑦ SETUP
⑧ MENU
⑨ RETURN
⑩ AUDIO (*)

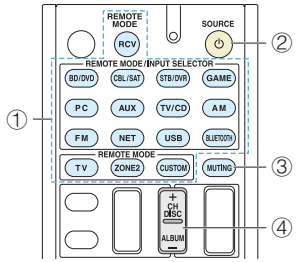


⑪ ►, ❚❚, ■, ◄◄, ►►, I◄◄, ►►I (*)
⑫ A (Red) (*), B (Green), C (Yellow) (*), D (Blue) (*)
⑬ Number 1~9, 0, +10 (*)
⑭ CLR, DISPLAY

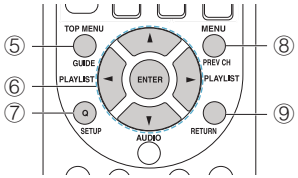
* Not CEC-compatible. ("A (Red) (*), B (Green), C (Yellow) (*), D (Blue) (*)" are intended only for "DVD player/DVD recorder")

VCR/PVR operation

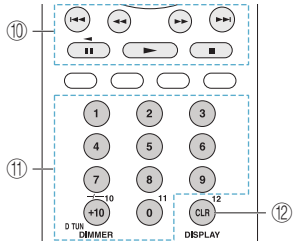
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



① REMOTE MODE
② ⏻SOURCE
③ MUTING
④ CH +/–



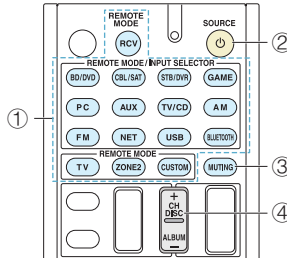
⑤ GUIDE
⑥ ▲/▼/◄/►, ENTER
⑦ SETUP
⑧ PREV CH
⑨ RETURN



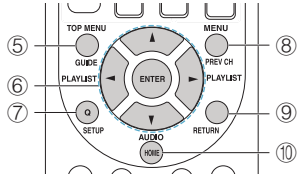
⑩ ►, ❚❚, ■, ◄◄, ►►, I◄◄, ►►I
⑪ Number 1~9, 0, +10
⑫ CLR, DISPLAY

Satellite receiver/Cable receiver operation

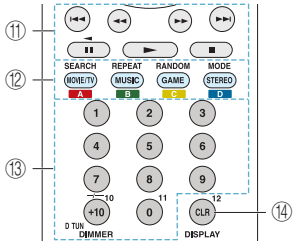
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



① REMOTE MODE
② ⏻SOURCE
③ MUTING
④ CH +/–



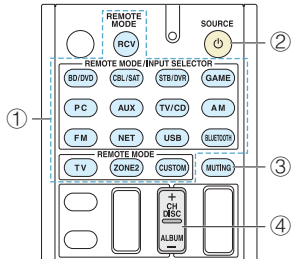
⑤ GUIDE
⑥ ▲/▼/◄/►, ENTER
⑦ SETUP
⑧ PREV CH
⑨ RETURN
⑩ AUDIO



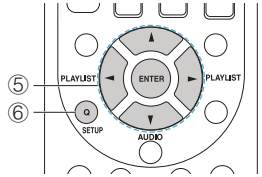
⑪ ►, ❚❚, ■, ◄◄, ►►, I◄◄, ►►I
⑫ A (Red), B (Green), C (Yellow), D (Blue)
⑬ Number 1~9, 0, +10
⑭ CLR, DISPLAY

CD player operation

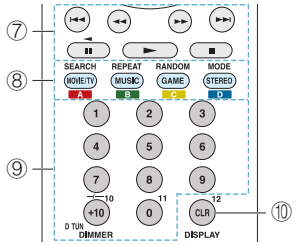
Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



① REMOTE MODE
② ⏻SOURCE
③ MUTING
④ DISC +/–



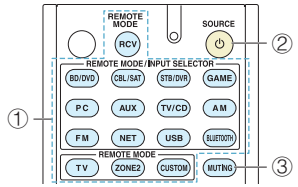
⑤ ▲/▼/◄/►, ENTER
⑥ SETUP



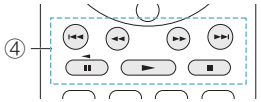
⑦ ►, ❚❚, ■, ◄◄, ►►, I◄◄, ►►I
⑧ SEARCH, REPEAT, RANDOM, MODE
⑨ Number 1~9, 0, +10
⑩ CLR, DISPLAY

Cassette tape deck operation

Press the REMOTE MODE button programmed with the remote control code for the relevant AV component to switch the remote controller mode to that for the AV component. Then, operate by using the corresponding buttons. Available buttons vary depending on the product category of the component. Note that some buttons may not work, or the remote controller may not work at all with some components.



① REMOTE MODE
② ⏻SOURCE
③ MUTING



④ ►, ◄ (Reverse Playback), ■, ◄◄, ►►, I◄◄, ►►I

To operate CEC-compatible components

The TV and BD/DVD buttons on the remote controller are preprogrammed with remote control codes for linked operation of some CEC (Consumer Electronics Control)-compatible TV sets and Blu-ray Disk players. By connecting to the unit via HDMI, you may operate them using the AV receiver's remote controller.

- If you cannot operate your CEC-compatible component, program one of the following remote control codes to the TV or BD/DVD button.
  TV button: 11807/13100/13500 (CEC-compatible TV)
  BD/DVD button: 32910/33101/33501/31612 (CEC-compatible BD/DVD player)

Press TV/CD or GAME to display "TV/CD" or "GAME" on the unit's display. Then, hold down TV/CD or GAME for 3 seconds to switch the input name to "DOCK" or "TAPE".

Connecting and Operating Onkyo RI Components

Summary of RI function

Connecting an Onkyo component with RI jack such as the separately sold RI Dock to the unit by using an RI cable and an analog audio (RCA) cable enables the following RI functions:

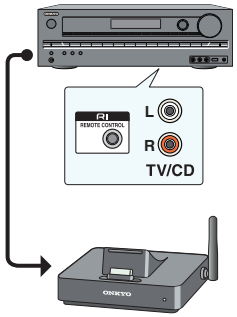
System On/Auto Power On: Starting playback on a component connected via RI when the unit is on standby mode, automatically turns on the unit to select the relevant component as its input source.

Direct Change: When playback is started on a component connected via RI, the unit selects that component as the input source.

Remote Controller Operation: Allows you to operate RI-compatible Onkyo components using the AV receiver's remote controller. Point the remote controller at remote control sensor of the unit. This operation is possible only when the RI remote control code is programmed.

- Some components may not support all RI functions.
- These functions do not work when Zone 2 is turned on.
- For information on the RI functions, also refer to each component's instruction manual.

RI connection and settings



Connect an Onkyo component with RI jack to the unit using an RI cable and an analog audio (RCA) cable. For details, refer to the instruction manual of the component with RI jack. The RI cable can be connected in any order. When there are two RI jacks, you can connect to either one as both jacks work in the same way.
To connect the RI Dock or cassette tape deck via RI, you must:

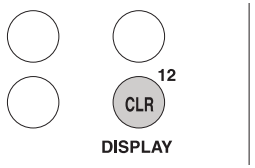
■ Renaming the Input Selector

To make the RI functions work, you must rename the input selectors. Press RCV on the remote controller to switch its mode to RECEIVER mode and the press HOME. Select "9. Source Setup" in "Setup" menu and Rename the input selector by setting "DOCK" or "TAPE".

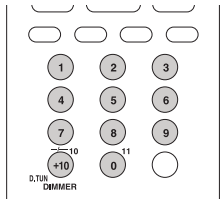
■ Program the RI remote control code

Program the remote control code to desired REMOTE MODE button on the remote controller. This will allow you to operate the component by pointing the remote controller at the unit instead of the component.

1. Press DISPLAY for 3 or more seconds while holding down the REMOTE MODE button to which you want to program the remote control code. The remote indicator lights.
   - The RCV, ZONE2, and TV buttons cannot be programmed.



2. With the number buttons, enter the following 5-digit remote control code within 30 seconds.



   - RI Dock: 81993
   - Cassette tape deck with RI jack: 42157

   Programming is complete when the remote indicator flashes twice. The remote indicator flashes once slowly when programming the remote control code fails. Try programming again.

Input selector on the RI Dock: Select "HDD" or "HDD/DOC". For details, refer to the RI Dock's instruction manual.

To operate Onkyo components directly or Onkyo components that are not connected via RI, use the following remote control codes:
Onkyo DVD player: 30627
Onkyo CD player: 71817
RI Dock: 82990

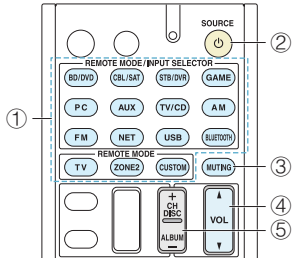
- With some models, operation may not be possible in part or not possible at all.

iPod/iPhone Operation

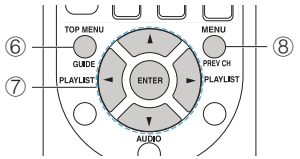
The RI Dock allows you to use the AV receiver's remote controller to operate and play music on your iPod/iPhone. Moreover, it also allows you to view videos on your iPod/iPhone on the screen of your TV, as well as perform RI operations if connected via RI. This operation is possible only when the RI remote control code is programmed.

Before Operation
Before performing any operation on your iPod/iPhone, make sure to have it updated to the latest version via iTunes. Certain buttons may not work for some iPod/iPhone models and generations, or RI Dock. For details on the operation, refer to the RI Dock's instruction manual.

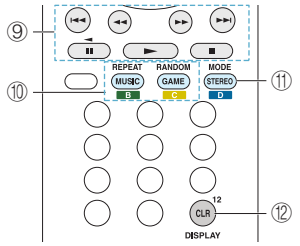
Switch the remote controller mode by pressing the REMOTE MODE button programmed with the remote control code. Then, operate by using the corresponding buttons. Point the remote controller at the unit.



① REMOTE MODE
② ⏻SOURCE
③ MUTING
④ VOL ▲/▼
⑤ ALBUM +/−



⑥ TOP MENU
⑦ ▲/▼/◄/►, ENTER, PLAYLIST◄/►
⑧ MENU



⑨ ►, ❚❚, ■, ◄◄, ►►, I◄◄, ►►I
⑩ REPEAT, RANDOM
⑪ MODE
⑫ DISPLAY

- Pressing DISPLAY turns on the backlight for a few seconds.
- MODE allows you to use the Resume function. You can resume playing from the song that was playing when you removed your iPod/iPhone from the DS-A2 RI Dock.

Updating the Firmware

Sammary of Firmware Update

There are two methods for updating the firmware: via network and via USB.
Use the one that best suits your environment.

- For the latest information on updates, visit the Onkyo website.
- Before updating, make sure that the speaker setup microphone is not connected.
- During an update, do not
  – Disconnect and reconnect any cable, USB storage device, speaker setup microphone or headphones, or perform any operation on the component such as turn off its power
  – Access to this unit from a PC or smartphone using Android application
- The update may take about 10 minutes to complete for either method, via network or via USB.
  Furthermore, existing settings are saved regardless of the method used.

Disclaimer: The program and accompanying online documentation are furnished to you for use at your own risk.
Onkyo will not be liable and you will have no remedy for damages for any claim of any kind whatsoever concerning your use of the program or the accompanying online documentation, regardless of legal theory, and whether arising in tort or contract.
In no event will Onkyo be liable to you or any third party for any special, indirect, incidental, or consequential damages of any kind, including, but not limited to, compensation, reimbursement or damages on account of the loss of present or prospective profits, loss of data, or for any other reason whatsoever.

Updating the Firmware via Network

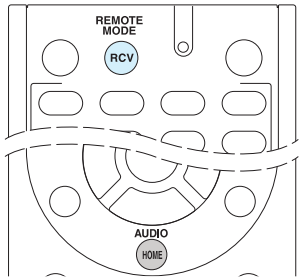
Before Start

- Check that the unit is turned on, and the connection to the Internet is secured.
- Turn off the controller component (PC etc.) connected to the network.
- Stop any playing Internet radio, USB storage device, or server content.
- If Zone 2 is active, press OFF on the unit to turn it off.
- If "HDMI CEC (RIHD)" is set to "On", set it to "Off" (default value).
  - After pressing RCV, press HOME on the remote controller. Select "Setup" with the cursors and press ENTER. Then, after selecting "11. HDMI Setup" and pressing ENTER, select "HDMI CEC (RIHD)" to select "Off".

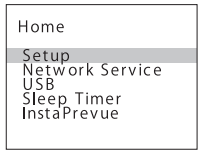
∗ The description may differ from the on-screen display but that will not change the way to operate or the function.

■ Update

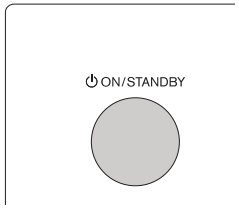
1. After pressing RCV, press HOME on the remote controller.



The Home menu is displayed on the TV screen.



2. Select "Setup" - "10. Hardware" - "Update via NET" in order using the cursor buttons, and then press ENTER.
   - If "10. Hardware" is grayed out and cannot be selected, wait for a while until it starts up.
   - You will not be able to select "Update via NET" if there is nothing to update.
3. Select “Update” and press ENTER to start updating.
   - During the update, the TV screen may go black depending on the updated program. In that case, check the progress on the display of the unit. The TV screen will remain black until the update is complete and the power is turned on again.
   - "Completed!" is displayed when the update is complete.
4. Press ⏻ON/STANDBY on the unit to place the unit to standby. This is the end of the firmware update and you have now the latest firmware installed.
   - Do not use ⏻RECEIVER on the remote controller.



■ If an Error Message is Displayed

Case 1: When an error occurs, "∗-∗∗ Error!" is appeared on the display. ("∗" refers to the numbers displayed when error occurs) Check the following:

Error Code

- **∗-01, ∗-10:**
  Ethernet cable not found. Connect the Ethernet cable properly.
- **∗-02, ∗-03, ∗-04, ∗-05, ∗-06, ∗-11, ∗-13, ∗-14, ∗-16, ∗-17, ∗-18, ∗-20, ∗-21:**
  Internet connection error. Check the following:
  – Whether the router is turned on
  – Whether this unit and router are connected to the network

  If they are connected, disconnect the power cord of the unit and router, and reconnect it. This may solve the problem. If you are still unable to connect to the Internet, the DNS server or proxy server may be temporarily down. Check the service status with your ISP provider.
- **Others**:
  Disconnect then reconnect the AC power cord, from the beginning.

Updating the Firmware via USB

Before Start

- Prepare a 64MB or larger USB storage device.
  - Media inserted in a USB card reader may not be used for this function.
  - USB storage devices with security function are not supported.
  - USB hubs and USB devices with hub function are not supported. Do not connect these devices to the unit.
- Delete any data stored on the USB storage device.
- Turn off the controller component (PC etc.) connected to the network.
- Stop any playing Internet radio, USB storage device, or server content.
- If Zone 2 is active, press OFF on the unit to turn it off.
- If "HDMI CEC (RIHD)" is set to "On", set it to "Off" (default value).
  - After pressing RCV, press HOME on the remote controller. Select "Setup" with the cursors and press ENTER. Then, after selecting "11. HDMI Setup" and pressing ENTER, select "HDMI CEC (RIHD)" to select "Off".

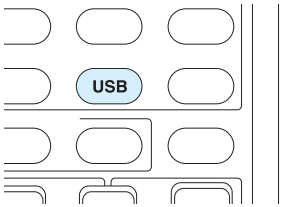
∗ Some USB storage devices may take long to load, may not be loaded correctly, or may not be correctly fed depending on the device or their content.

∗ Onkyo will not be liable whatsoever for any loss or damage of data, or storage failure arising from the use of the USB storage device with the AV receiver. Thank you for your understanding.

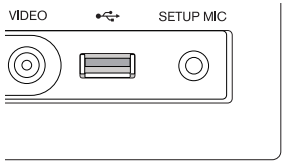
∗ The description may differ from the on-screen display but that will not change the way to operate or the function.

■ Update

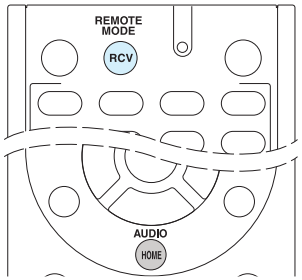
1. Connect the USB storage device to your PC.
2. Download the firmware file from the Onkyo website to your PC and unzip.
   Firmware files are named in the following way:
   ONKAVR∗∗∗∗_∗∗∗∗∗∗∗∗∗∗∗.zip
   Unzip the file on your PC. The number of unzipped files and folders varies depending on the model.
3. Copy all unzipped files and folders to the root folder of the USB storage device.
   - Make sure to copy the unzipped files.
4. Press USB on the remote controller to select "USB".



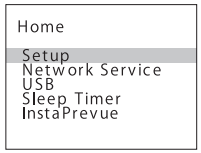
5. Connect the USB storage device to the USB port of the unit.
   - If you connect a USB hard disk drive to the USB port of the unit, we recommend that you use its AC adapter to power it.
   - If the USB storage device has been partitioned, each section will be treated as an independent device.



6. After pressing RCV, press HOME on the remote controller.

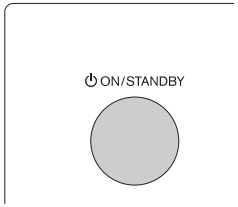


The Home menu is displayed on the TV screen.



7. Select "Setup" - "10. Hardware" - "Update via USB" in order using the cursor buttons, and then press ENTER.
   - If "10. Hardware" is grayed out and cannot be selected, wait for a while until it starts up.
   - You will not be able to select "Update via USB" if there is nothing to update.
8. Select "Update" and press ENTER to start updating.
   - During the update, the TV screen may go black depending on the updated program. In that case, check the progress on the display of the unit. The TV screen will remain black until the update is complete and the power is turned on again.
   - During the update, do not turn off, or disconnect then reconnect the USB storage device.
   - "Completed!" is displayed when the update is complete.
9. Disconnect the USB storage device from the unit.

10. Press ⏻ON/STANDBY on the unit to place the unit to standby. This is the end of the firmware update and you now have the latest firmware installed.
    - Do not use ⏻RECEIVER on the remote controller.



■ If an Error Message is Displayed

Case 1: When an error occurs, "∗-∗∗ Error!" is appeared on the display. ("∗" refers to the numbers displayed when error occurs) Check the following:

Error Code

- **∗-01, ∗-10:**
  USB storage device not found. Check whether the USB storage device or USB cable is correctly inserted to the USB port of the unit.
  Connect the USB storage device to an external power source if it has its own power supply.
- **∗-05, ∗-13, ∗-20, ∗-21:**
  The firmware file is not present in the root folder of the USB storage device, or the firmware file is for another model. Retry from the download of the firmware file.
- **Others:**
  Disconnect then reconnect the AC power cord, from the beginning.

Troubleshooting

Read Before Start

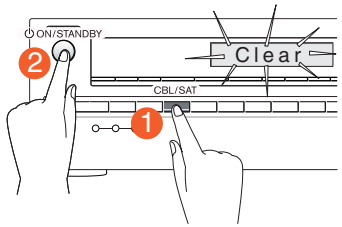
Problem may be solved by turning on and off or reconnecting the power cord, besides rechecking the connection, setting or operation procedure. Try that on both the unit and components connected to the unit. Furthermore, in case of no picture output, no sound or HDMI linked system does not work etc., may be solved if HDMI cable is reconnected. When reconnecting, note that HDMI cable may not be connected properly if it is coiled. After reconnection, turn off and then on again the power of all connected components.

Resetting the unit

Problem may be solved by resetting the unit to initialize all the setting to factory default. If you cannot resolve the issue from the procedure in trouble shooting, try resetting the unit as explained below. If you reset the unit status, your preferences will be reset to the defaults. Note them down before starting reset.

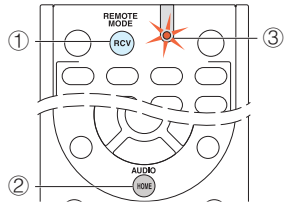
■ Resetting method

1. While holding down CBL/SAT on the unit (Do not release this button until step 2 is finished.)
2. Press ⏻ON/STANDBY on the unit. “Clear” is appeared on the display and the unit will enter standby mode.



■ Resetting method of the remote controller

1. While holding down ① RCV (Do not release this button until step 2 is finished.).
2. Press and hold ② HOME until the ③ remote indicator lights (about 3 seconds). Within 30 seconds, press ① RCV again.



Power

■ Can not turn on the unit

- Make sure that the power cord is properly plugged into the wall outlet.
- Unplug the power cord from the wall outlet, wait 5 seconds or more, then plug it in again.

■ The unit turns off unexpectedly

- The unit will automatically enter standby mode when Auto Standby has been set and launches.

■ The unit turns off and after restoring the power, it turns off again

- The protection circuit has been activated. Remove the power cord from the wall outlet immediately. Make sure that all speaker cables and input sources are properly connected, and leave the unit with its power cord disconnected for 1 hour. After that, reconnect the power cord and turn the power on. If the unit turns off again, avoid resetting it and unplug the power cord. Then contact your Onkyo dealer.

Caution: If “CHECK SP WIRE” is appeared on the display, the speaker cables may be shorting.

WARNING: If smoke, smell or abnormal noise is produced by the AV receiver, unplug the power cord from the wall outlet immediately and contact the dealer or Onkyo Support.

Audio

■ **There is no sound, or it is very quiet**
- Make sure that the proper input source is selected.
- Make sure that connecting plugs are pushed in all the way.
- Make sure that the inputs and outputs of all components are connected properly.
- Make sure that the polarity of the speaker cables is correct, and that no bare wires are in contact with the metal part of speaker terminals.
- Make sure that the input source is properly selected.
- Make sure that the speaker cables are not shorting.
- Check the volume. The volume level is adjustable between Min, 1 to 79, Max (80) It is normal that the unit volume level is set up to 40 or around.
- If the MUTING indicator on the display flashes, press MUTING on the remote controller to unmute the unit.
- While headphones are connected to the PHONES jack, no sound is output from the speakers.
- If there is no sound from a BD/DVD player connected to an HDMI IN, check the BD/DVD player's output settings, and be sure to select a supported audio format.
- Check the digital audio output setting on the connected component. On some game consoles, such as those that support DVD, the default setting is off.
- With some DVD-Video discs, you need to select an audio output format from a menu.
- If your turntable uses an MC cartridge, you must connect an MC head amp, or an MC transformer.
- Make sure that none of the connecting cables are bent, twisted, or damaged.
- Not all listening modes use all speakers.
- Specify the speaker distances and adjust the individual speaker levels.
- Make sure that the speaker setup microphone is not still connected.
- If the input signal format is set to "PCM" or "DTS", set it to "Off".

■ **Only the front speakers produce sound**
- When the Stereo or Mono listening mode is selected, only the front speakers and subwoofer produce sound.
- Make sure the speakers are configured correctly.

■ **Only the center speaker produces sound**
- If you use the Dolby Pro Logic II listening mode with a mono source, such as an AM radio station or mono TV program, the sound is concentrated in the center speaker.
- Make sure the speakers are configured correctly.

■ **The surround speakers produce no sound**
- When the T-D (Theater-Dimensional), Stereo or Mono listening mode is selected, the surround speakers produce no sound.
- Depending on the source and current listening mode, not much sound may be produced by the surround speakers. Try selecting another listening mode.
- Make sure the speakers are configured correctly.

■ **The center speaker produces no sound**
- When the Stereo or Mono listening mode is selected, the center speaker produces no sound.
- Make sure the speakers are configured correctly.

■ **The subwoofer produces no sound**
- When you play source material that contains no information in the LFE channel, the subwoofer produces no sound.
- Make sure the speakers are configured correctly.

■ **There is no sound with a certain signal format**
- When listening to Dolby Digital and/or DTS sound, digital connection is necessary.
- Check the digital input terminal setting. If the connection is different from the default, re-setting is necessary.
- Check the digital audio output setting on the connected component. On some game consoles, such as those that support DVD, the default setting is off.

■ **Can not select the Pure Audio listening mode (European, Australian and Asian models)**
- The Pure Audio listening mode can not be selected while Zone 2 is on.

■ **Can not select a desired listening mode**
- Depending on the connecting status of the speaker, some listening modes may not be selected. Check the details in "Using the Listening Modes" section.

■ **Can not play 5.1ch**
- Make sure the speakers are configured correctly.
- Not all listening modes use all speakers.

■ **The speaker volume cannot be set as required**
- Check to see if a maximum volume has been set.

■ **Noise can be heard**
- Using cable ties to bundle analog audio (RCA) cables with power cords, speaker cables, etc. may degrade the audio performance, so refrain from doing it.
- An analog audio (RCA) cable may be picking up interference. Try repositioning your cables.

■ **The Late Night function does not work**
- Make sure the source material is Dolby Digital, Dolby Digital Plus, or Dolby TrueHD.

■ **About DTS signals**
- When DTS program material ends and the DTS bitstream stops, the unit remains in DTS listening mode and the dts indicator remains on. This is to prevent noise when you use the pause, fast forward, or fast reverse function on your player. If you switch your player from DTS to PCM, you may not hear any sound because the unit does not switch formats immediately. In such case, you should stop your player for about 3 seconds and then resume playback.
- With some CD and LD players, you will not be able to playback DTS material properly even though your player is connected to a digital input on the AV receiver. This is usually because the DTS bitstream has been processed (e.g., output level, sampling rate, or frequency response changed) and the AV receiver does not recognize it as a genuine DTS signal. In such cases, you may hear noise.
- Playing DTS program material, using the pause, fast forward, or fast reverse function on your player may produce a short audible noise. This is not a malfunction.

■ **The beginning of audio received by an HDMI IN can not be heard**
- Since it takes longer to identify the format of an HDMI signal than it does for other digital audio signals, audio output may not start immediately.

Video

■ **There is no picture**
- Make sure that all video connecting plugs are pushed in all the way.
- Make sure that each video component is properly connected.
- If the video source is connected to a component video input, you must assign that input to an input selector, and your TV must be connected to COMPONENT VIDEO OUT terminal.
- If the video source is connected to a composite video input, your TV must be connected to the MONITOR OUT V terminal.
- If the video source is connected to an HDMI input, you must assign that input to an input selector, and your TV must be connected to the HDMI output(s).
- While the Pure Audio (European, Australian and Asian models) listening mode is selected, the analog video circuitry is turned off and only video signals input through HDMI IN can be output.
- Make sure the switching of input screens is proper at the monitor side such as a TV.
- Images of a component connected to the composite video input terminal can not be output by converting on the monitor of a TV or other components connected to COMPONENT VIDEO OUT terminal.
- When the TV image is blurry or unclear, power code or connection cables of the unit may have interfered. In that case, keep distance between TV antenna cable and cables of the unit.

■ **There is no picture from a source connected to an HDMI IN**
- Reliable operation with an HDMI-to-DVI adapter is not guaranteed. In addition, video signals from a PC are not guaranteed.

■ **The on-screen menus do not appear**
- On your TV, make sure that the video input to which this unit is connected is selected.
- When the AV receiver is not connected to a TV via HDMI OUT, on-screen menus are not displayed.

Tuner

■ **Reception is noisy, FM stereo reception is noisy, or the "FM STEREO" indicator does not light**
- Re-check the antenna connection.
- Relocate your antenna.
- Move the unit away from your TV or PC.
- Passing cars and airplanes can cause interference.
- Concrete walls weaken radio signals.
- Listen to the station in mono.
- When listening to an AM station, operating the remote controller may cause noise.
- If nothing improves the reception, install an outdoor antenna.

Remote Controller

■ **The remote controller does not work**
- Before operating this unit using remote controller, be sure to press RCV.
- Make sure that the batteries are installed with the correct polarity.
- Install new batteries. Do not mix different types of batteries, or old and new batteries.
- Make sure that the remote controller is not too far away from the unit, and that there is no obstruction between the remote controller and the remote control sensor of the unit.
- Make sure that the unit is not subjected to direct sunshine or inverter-type fluorescent lights. Relocate if necessary.
- If the unit is installed in a rack or cabinet with colored-glass doors, the remote controller may not work reliably when the doors are closed.
- Make sure you have selected the correct remote controller mode.
- When using the remote controller to control other manufacturers' AV components, some buttons may not work as expected.
- Make sure you have entered the correct remote control code.
- Make sure to set the same ID on both the unit and remote controller.

■ **Operating other Onkyo component by using a RI remote control code is not available**
- Make sure that the Onkyo component is properly connected with RI cable. When RI cable is used for connection, make sure to connect analog audio (RCA) cable as well. (Connecting only an RI cable is not enough.)
- Make sure you have selected the correct remote controller mode.
- Make sure that the input display is correctly set.
- Input the RI remote control code again.
- When the RI remote control code is input, point the remote controller at remote control sensor of the unit.

■ **Can not operate Onkyo components (ones without RI connection) and components of other makers**
- Make sure that the connection with other components is correct.
- Input a correct remote control code again. If there are several codes, try each code.
- Make sure that the remote controller mode is correctly selected.
- Operate the remote controller by setting toward the light receiving section of each component.
- Some components may not start the operation.

RI Dock for iPod/iPhone

■ **There is no sound**
- Make sure your iPod/iPhone is actually playing.
- Make sure your iPod/iPhone is properly inserted in the Dock.
- Make sure the unit is turned on, the correct input source is selected, and the volume is turned up.
- Make sure the plugs are pushed in all the way.
- Try resetting your iPod/iPhone.

■ **There is no video**
- Make sure that your iPod/iPhone model's TV OUT setting is set to On.
- Make sure the correct input is selected on your TV or the unit.
- Some versions of the iPod/iPhone do not output video.

■ The AV receiver's remote controller does not control my iPod/iPhone

- Make sure your iPod/iPhone is properly inserted in the Dock. If your iPod/iPhone is in a case, it may not connect properly to the Dock. Always remove your iPod/iPhone from the case before inserting it into the Dock.
- The iPod/iPhone can not be operated while it is displaying the Apple logo.
- Make sure you have selected the correct remote controller mode.
- When you use the AV receiver's remote controller, point it toward this unit.
- Before operating with the remote controller, you may need to play on your iPod/iPhone to make the input selector be recognized.
- Try resetting your iPod/iPhone.
- Depending on your iPod/iPhone model and generation, some buttons may not work as expected.

■ The unit unexpectedly selects my iPod/iPhone as the input source

- Always pause iPod/iPhone playback before selecting a different input source. If playback is not paused, the Direct Change function may select your iPod/iPhone as the input source by mistake during the transition between tracks.

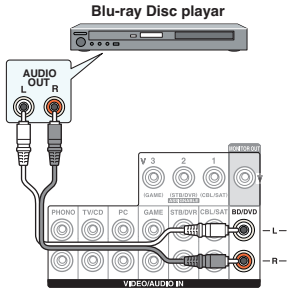
■ iPod/iPhone does not work properly

- Try reconnecting your iPod/iPhone.

Zone Function

■ There is no sound

- Audio signal from "NET", "USB" and "BLUETOOTH" input selector can be output for Zone function. Connect audio components using the analog audio (RCA) cable as audio signal from the components connected using HDMI or digital audio cable cannot be output for one function. Note that connected components may have to be setup to output analog audio signal.



Wi-Fi (Wireless LAN) Network

■ Cannot access to Wi-Fi (Wireless LAN) network or sound playback is interrupted and communication does not work

- Try plugging/unplugging the power supply of wireless LAN router and the unit, check the wireless LAN router power-on status, and try reboot of the wireless LAN router.
- The setting of SSID and encryption (WEP, etc.) is not correct. Make sure the network settings of the unit is properly set.
- Connection to an SSID that includes multi-byte characters is not supported. Name the SSID of the wireless LAN router using single-byte alphanumeric characters only and try again.
- Can not receive radio wave due to a bad connection. Shorten the distance from wireless LAN access point or remove obstacles for a good visibility, and try again. Place the unit away from microwave ovens or other access points. 2.4 GHz band for wireless LAN may not be enough. Connect ETHERNET terminal of the unit and the router via an Ethernet cable after changing "Wi-Fi" in "12. Network Setup" to "Off".
- Place the unit away from the components emitting electromagnetic waves on the 2.4 GHz band (microwave ovens, game consoles, etc.). If this does not solve the problem, stop using other components which emit electromagnetic waves.
- When other wireless LAN devices are used near the unit, several issues such as interrupted playback and communication may occur. You can avoid these issues by changing the channel of your Wi-Fi router. For instructions on changing channels, see the instruction manual provided with your Wi-Fi router.
- If there is a metallic object near the unit, wireless LAN connection may not be possible as the metal can effect on the radio wave.
- If there is more than one access point in the network, separate each access point.
- It is recommended to place the Wi-Fi router (access point) and the unit in the same room.

■ The connection does not complete even when the automatic setting button is pressed on the wireless LAN router

- The wireless LAN router setting may be switched to Manual. Return the setting to Auto.
- Try the manual set-up. The connection may succeed.

■ On the list of SSID on the TV menu screen, there is no corresponding SSID

- When the wireless LAN router setting is at stealth mode (mode to hide the SSID key) or when ANY connection is off, the SSID is not displayed. Change the setting and try again.

Bluetooth

■ Music playback is unavailable on the unit even after successful Bluetooth connection

- Depending on the characteristics or specifications of your Bluetooth-enabled device, playback on the unit is not guaranteed.
- When the audio volume of your Bluetooth-enabled device is set low, the playback of audio may be unavailable. Volume up the Bluetooth-enabled device.
- Depending on the Bluetooth-enabled device, Send/Receive selector switch may be provided. Select Send mode.
- Even when a music file is playing on the Bluetooth-enabled device, the sound can not be played if the connection is not established with the unit. Make sure that the unit is connected (this unit is selected as the sound output destination).

■ Sound is interrupted

- Problem may be occurring at the Bluetooth-enabled device. Check the information on a webpage.

■ **The audio quality is poor after connection with a Bluetooth-enabled device**
- The Bluetooth reception is poor. Move the Bluetooth-enabled device closer to the unit or remove any obstacle between the Bluetooth-enabled device and this unit.

■ **Can not connect with this unit**
- Try plugging/unplugging the power of the unit and try turning on/off the Bluetooth-enabled device. Re-startup of the Bluetooth-enabled device may be effective.
- The Bluetooth-enabled device does not support the profiles required for this unit.
- The Bluetooth function of the Bluetooth-enabled device is not enabled. Refer to the user manual of the Bluetooth-enabled device for how to enable the function.
- Near devices such as microwave oven or cordless phone, which use the radio wave in the 2.4 GHz range, a radio wave interference may occur, which disables the use of the AV receiver.

■ **Bluetooth connection can not be built**
- When building a Bluetooth connection between this unit and your Bluetooth-enabled device for the first time, if the connection fails, clear "Pairing Infor" in "13. Bluetooth", turn off and then on again your Bluetooth-enabled device to clear the device name, and build the connection again.
- If there is a metallic object near the unit, Bluetooth connection may not be possible as the metal can effect on the radio wave.
- If the wireless LAN and Bluetooth connections are used at the same time, try to connect the ETHERNET port and router with the Ethernet cable after changing “WiFi” in “12. Network Setup” to "Off" for a better connection.

■ **The Bluetooth Auto Reconnect function does not work**

This function may not work depending on your Bluetooth-enabled device. In this case, play on your Bluetooth-enabled device after pairing with this unit.

NET/USB Function

■ **Can not access the network server**
- When NET is blinking, the unit is not properly connected to the home network.
- Make sure your network server has been started up.
- Make sure your network server is properly connected to the home network.
- Make sure your network server is correctly set.
- Make sure that the router LAN side port is properly connected to the AV receiver.
- Make sure that the correct IP address is allocated in "12. Network Setup" setting.

■ **Playback stops while listening to music files on the network server**
- Make sure the network server is compatible with this unit.
- When the PC is serving as the network server, try quitting any application software other than the server software (Windows Media Player 12 etc.).
- If the PC is downloading or copying large files, the playback may be interrupted.

■ **Can not access the Internet radio**
- Certain network service or contents available through the unit may not be accessible in case the service provider terminates its service.
- If a specific radio station is unavailable for listening, make sure the registered URL is correct, or whether the format distributed from the radio station is supported by the AV receiver.
- When NET is blinking, the AV receiver is not properly connected to the home network.
- Make sure that your modem and router are properly connected, and make sure they are both turned on.
- Make sure that connecting to Internet from other components is possible. If connecting is not possible, turn off all components connected to the network, wait for a while, and then turn on the components again.
- Make sure that the router LAN side port is properly connected to the AV receiver.
- Make sure that the correct IP address is allocated in "12. Network Setup" setting.
- Depending on ISP, setting the proxy server is necessary.
- Make sure that the used router and/or modem is supported by your ISP.

■ **Can not connect to the AV receiver from a Web browser**
- Make sure that the IP address of the AV receiver is correctly input to the Internet browser.
- When DHCP is used for allocating the IP address, the IP address of this AV receiver may have been changed.
- Make sure that both AV receiver and PC are properly connected to the network.

■ **USB storage device is not displayed**
- Make sure that USB storage device and USB cable are securely plugged to the USB port of this AV receiver.
- Remove the USB storage device from the AV receiver once, and then try re-connecting.
- Operability of a USB bus powered hard disk that receives power from the unit via the USB port is not guaranteed.
- Depending on the type of format, the playback may not be performed normally. Check the type of the file formats that is supported.
- USB storage device with security functions may not be played.

Others

■ **Power consumption in standby mode**
- In the following cases, the power consumption in standby mode may reach up to a maximum of 5 W:
  - When “Network Standby” in "12. Network Setup" is set to "On".
  - When “HDMI CEC (RIHD)” is set to “On”. (Depending on the TV status, the AV receiver will enter normal standby mode.)
  - When “HDMI Through” is set to other than “Off”.
  - When "Wakeup" in "13. Bluetooth" is set to "On".

■ **The sound changes when I connect my headphones**
- When a listening mode other than Direct, Pure Audio (European, Australian and Asian models), or Mono is selected, connecting a headphone automatically selects Stereo.

■ **The display does not work**
- The display is turned off when the Pure Audio (European, Australian and Asian models) listening mode is selected.

■ **How do I change the language of a multiplex source**
- Select “Main” or “Sub” for “Input Ch(Mux)” in “8. Audio Adjust”.

■ **The RI functions do not work**

- To use RI, you must make an RI connection and an analog audio (RCA) cable between the component and AV receiver, even if they are connected digitally.
- While Zone 2 is selected, the RI functions do not work.

■ **The functions System On/Auto Power On and Direct Change do not work for components connected via RI**

- These functions do not work when Zone 2 is turned on.

■ **When performing Automatic Speaker Setup, the measurement fails and the message "Ambient noise is too high." is displayed.**

- This can be caused by a malfunction in your speaker unit. Check if the unit produces normal sounds.

■ **The display is dark**

- Make sure that Dimmer function is not working. Press DIMMER button and change the brightness level of the display.

■ **The following settings can be made for the composite video inputs**

- While holding down the input selector button to configure, press HOME once at a time until "Video ATT: On" is appeared on the display. To resume the setup, repeat the above described step until "Video ATT: Off" is appeared on the display.
  This setting is possible for input selectors assigned with one of the video inputs "VIDEO 1" to "VIDEO 3" in "3. Composite". If you have a game console connected to the composite video input, and the picture is not very clear, you can attenuate the gain.
  Video ATT: Off: (default).
  Video ATT: On: (Gain is reduced by 2 dB.)

■ **If the picture on your TV/monitor connected to the HDMI output(s) is unstable, try turning the DeepColor function off.**

- To turn off the DeepColor function, press STB/DVR and ⏻ON/STANDBY on the AV receiver simultaneously. While holding down STB/DVR, press ⏻ON/STANDBY repeatedly until "Deep Color:Off" is appeared on the display. To reactivate the DeepColor function, repeat the above described step until "Deep Color:On" is appeared on the display.

The AV receiver contains a microPC for signal processing and control functions. In very rare situations, severe interference, noise from an external source, or static electricity may cause it to lockup. In the unlikely event that this happens, unplug the power cord from the wall outlet, wait at least 5 seconds, and then plug it back in.

Onkyo is not responsible for damages (such as CD rental fees) due to unsuccessful recordings caused by the unit's malfunction.
Before you record important data, make sure that the material will be recorded correctly.

Before disconnecting the power cord from the wall outlet, set the AV receiver to standby.

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Reference Information

Linked Operation with CEC-compatible Components

The AV receiver is compatible with the following components (as of January 2014).

TV (Random order):
- Toshiba TV sets
- Sharp TV sets

Players/Recorders (Random order):
- Onkyo and Integra RIHD-compatible players
- Toshiba players and recorders
- Sharp players and recorders (only when used together with Sharp TV sets)

Models other than those mentioned above may have some interoperability if compatible with CEC, which is part of the HDMI Standard, but operation can not be guaranteed.

Note: For RI functions to work properly, do not connect more RIHD-compatible components than the quantities specified below, to the HDMI jack. RI functions are not guaranteed when more RIHD-compatible components than the below mentioned quantities are connected. Furthermore, do not connect the AV receiver to another AV receiver/AV amplifier via HDMI.
- Blu-ray Disc/DVD players: up to 3.
- Blu-ray Disc/DVD recorders: up to 3.
- Cable TV tuner, terrestrial digital tuner, and satellite broadcasting tuner: up to 4 units.

Checking whether the HDMI Linked Operation Settings Are Enabled

1. Turn on the power of all connected components.
2. Turn off the power of the TV, and confirm that the power of the connected components is turned off automatically with the link operation.
3. Turn on the power of the Blu-ray Disc/DVD player/recorder.
4. Start playback on the Blu-ray Disc/DVD player/recorder, and verify the following:
   - The AV receiver automatically turns on, and selects the input to which the Blu-ray Disc/DVD player/recorder is connected.
   - The TV automatically turns on, and selects the input to which the AV receiver is connected.
5. Following the operating instructions of the TV, select “Use the TV speakers” from the menu screen of the TV, and confirm that the audio is output from the speakers of the TV, and not from the speakers connected to the AV receiver.
6. Select “Use the speakers connected from the AV receiver” from the menu screen of the TV, and confirm that the audio is output from the speakers connected to the AV receiver, and not from the TV speakers.

Note:
- Even if you set to output audio on the TV speakers, audio will be output from the speakers connected to the AV receiver when you adjust the volume or switch the input on the AV receiver. To output audio from the TV speakers, redo the corresponding operations on the TV.
- In case of an RIHD connection with RI and RI audio control compatible components, do not connect the RI cable at the same time.
- On the TV, when you select anything other than the HDMI jack to which the AV receiver is connected, the input on the AV receiver will be switched to “TV/CD”.
- The AV receiver will automatically power on in conjunction when it determines it to be necessary. Even if the AV receiver is connected to an RIHD compatible TV or player/recorder, it will not power on if it is not necessary. It may not power on in conjunction when the TV is set to output audio from the TV.
- Linked system functions with the AV receiver may not work depending on the component model connected. In such cases, operate the AV receiver directly.

- When the player/recorder cannot be operated with the remote controller of the AV receiver, the corresponding component may not be programmed to support the remote controller operation of CEC. Program the remote control code of the component maker to the remote controller for using.

About HDMI

HDMI (High Definition Multimedia Interface) is a digital interface standard for connecting TVs, projectors, Blu-ray Disc/DVD players, set-top boxes, and other video components. Until now, several separate video and audio cables have been required to connect AV components. With HDMI, a single cable can carry control signals, digital video, and digital audio (2-channel PCM, multichannel digital audio, and multichannel PCM).
The HDMI video stream (i.e., video signal) is compatible with DVI (Digital Visual Interface) (∗1), so TVs and displays with a DVI input can be connected by using an HDMI-to-DVI adapter cable. (This may not work with some TVs and displays, resulting in no picture.)
This unit supports HDCP (High-bandwidth Digital Content Protection) (∗2), so it can display picture only on HDCP-compatible components.
The HDMI on this unit supports the following functions: Audio Return Channel, 3D, x.v.Color, DeepColor, Lip Sync, 4K (Passthrough), DTS-HD Master Audio, DTS-HD High Resolution Audio, Dolby TrueHD, Dolby Digital Plus, DSD and Multichannel PCM.

Supported Audio Formats of this Unit:
- 2-channel linear PCM (32–192 kHz, 16/20/24 bit)
- Multichannel linear PCM (up to 7.1 ch, 32–192 kHz, 16/20/24 bit)
- Bitstream (DSD, Dolby Digital, Dolby Digital Plus, Dolby TrueHD, DTS, DTS-HD High Resolution Audio, DTS-HD Master Audio)

Your Blu-ray Disc/DVD player must also support HDMI output of the above audio formats.

About Copyright Protection:
The AV receiver supports HDCP (High-bandwidth Digital Content Protection) (∗2), a copy-protection system for digital video signals. Other components connected to the AV receiver via HDMI must also support HDCP.

*1 DVI (Digital Visual Interface): The digital display interface standard set by the DDWG (∗3) in 1999.
*2 HDCP (High-bandwidth Digital Content Protection): The video encryption technology developed by Intel for HDMI/DVI. It is designed to protect video content and requires a HDCP-compatible HDMI/DVI receiver to display the encrypted video.
*3 DDWG (Digital Display Working Group): Lead by Intel, Compaq, Fujitsu, Hewlett Packard, IBM, NEC, and Silicon Image, this open industry group's objective is to address the industry's requirements for a digital connectivity specification for high-performance PC and digital displays.

Note:
- The HDMI video stream (i.e., video signal) is compatible with DVI (Digital Visual Interface), so TVs and displays with a DVI input can be connected by using an HDMI-to-DVI adapter cable. (Note that DVI connections only carry video, so you will need to make a separate connection for audio.) However, reliable operation with such an adapter is not guaranteed. In addition, video signals from a PC are not supported.
- The HDMI audio signal (sampling rate, bit length, etc.) may be restricted by the connected source component. If the picture is poor or there is no sound from a component connected via HDMI, check its setup. Refer to the connected component's instruction manual for details.

Home network (LAN)

The connection of several components via cables enabling the mutual communication is called a network.
At households, many families create (generally, the term "build" is used) a network to connect computers and gaming machines to the Internet and to exchange data between computers.
The network established in a relatively narrow area such as one household is called a LAN (Local Area Network).
In this manual, a term "home network" (network for a family) is used instead of "LAN," so this LAN becomes more familiar.
By connecting this unit with the network server such as a PC, playing music files in the network server (in the PC) is possible. Moreover, by connecting to the Internet, listening to the Internet radio is also possible.
This unit, PC, and Internet are not directly connected. When connecting with a PC and/or Internet, several components (network components) are necessary.

Components necessary for establishing a home network (LAN):
Components necessary for the home network (LAN) for using the NET function of this unit are as follows.

■ Router
A router is a device that controls information (data) flow between the unit, PC, and the Internet.
As a network term, the flow of information (data) is called "traffic". The router has a role to control the information flow as the traffic control, between connected components.
- A router with a built-in 100Base-TX switch is recommended.
- In addition, if your router has the DHCP function, facilitating the network setting becomes possible.
- Some routers have a built-in modem, and some Internet Service Providers (ISP) require you to use specific routers.

Please consult your ISP or PC dealer if you are unsure.

■ CAT5 Ethernet cable
The Ethernet cable is a cable that actually connects devices that comprise the network. There are straight type and cross type Ethernet cables.
- Use a shielded CAT5 Ethernet cable (straight-type) to connect the unit to your home network.

Consult your cable store for details of Ethernet cable.

■ Network server
(When PC and the like/network server is used)
Conponent that stores music files and provides those files at the time of playback.
- Requirements for use with this unit depend on the conponent that is used as a network server.
- Conditions for pleasant playback of music files on the AV receiver depend on the using network server (computer performance). See instruction manuals of using devices.

■ **Modem (when Internet radio is used)**
Device that connects home network (LAN) and Internet
There are many kinds of modems depending on the forms of Internet connection.
In addition, when connecting to the Internet, it is required to conclude an agreement with a company that provides Internet connection service, called ISP (Internet Service Provider).
Use a modem that is recommended by your ISP company for the Internet connection.
There are some devices that have both router and modem functions.
Within above network components, prepare a router, Ethernet cable, and network server when the NET function "network server" is used.
For enjoying the NET function "Internet radio," it is necessary to use the router, Ethernet cable, and modem (and agreement with ISP).

Server Requirements

■ **Server playback**
This unit can play digital music files stored on a PC or media server and supports the following technologies:
- Windows Media Player 11
- Windows Media Player 12
- DLNA-certified media server

The network server must be connected to the same network as this unit.
Up to 20,000 folders can be displayed, and folders may be nested up to 16 levels deep.

Note: Depending on the media server, the unit may not recognize it, or may not be able to play its music files.

■ **Remote playback**
Remote playback is the function that enables this AV receiver to play music files saved in different devices by operating the DLNA-compliant controller device and PC in the home network.
- Windows Media Player 12
- DLNA-certified (within DLNA Interoperability Guidelines version 1.5) media server or controller component.

∗ The setting varies depending on the media server or controller components. Refer to your devices' instruction manual for details.

If the operating system of your personal computer is Windows 8/Windows 7, Windows Media Player 12 is already installed. For more information, see the Microsoft web site.

USB Storage Device Requirements

- USB mass storage device class (but not always guaranteed).
- FAT16 or FAT32 file system format.
- If the USB storage device has been partitioned, each section will be treated as an independent device.
- Up to 20,000 folders can be displayed, and folders may be nested up to 16 levels deep.
- USB hubs and USB storage devices with hub functions are not supported. Do not connect these devices to the unit.

Note:
- If the media you connect is not supported, the message "No Storage" will be displayed.
- Sound files that are protected by copyright can not be played.
- When the USB audio player and this unit are connected, the audio player screen and the screen of the unit may be different. In addition, control functions of the audio player (classifying and sorting music files and adding information, etc.) are not available on this unit.
- Do not connect a PC to the USB port of the unit. Inputting sound to the USB port of the unit from a PC is not possible.
- Media inserted to the USB card reader may not be available in this function.
- Some USB storage devices and its contents may require some time to be read.
- Depending on the USB storage device, proper reading of the contents and proper supply of the power supply may not be possible.
- Onkyo accepts no responsibility whatsoever for the loss or damage to data stored on a USB storage device when that device is used with this unit. We recommend that you back up your important music files beforehand.
- Performance of the hard disk that receive power from the USB port of the unit is not guaranteed.
- If you connect a USB hard disk drive to the USB port of the unit, we recommend that you use its AC adapter to power it.
- When an audio player that are operated with batteries is used, make sure that the batteries have enough remaining power.
- USB devices with security functions can not be played.

Supported Audio Formats

- For server playback and playback from a USB storage device, this unit supports the following music file formats.
- Music files of the following formats that can be played depend on the network server. For example, when using Windows Media® Player 12, not all music files in the PC can be played. The music files that can be played are the ones registered to the Windows Media® Player 12 library.
- Variable bit-rate (VBR) files are supported. However, playback times may not be displayed correctly.
- This unit supports the gapless playback of the USB storage device in the following conditions.
  When WAV, FLAC and Apple Lossless files are continuously played back with the same format, sampling frequency, channels and quantization bit rate.
- Remote playback does not support the gapless playback.

Note:
- With remote playback, this unit does not support the following music file formats:
  – FLAC, Ogg Vorbis, DSD

■ **MP3 (.mp3 or .MP3)**
- Supported formats: MPEG-1/MPEG-2 Audio Layer 3
- Supported sampling rates: 8 kHz, 11.025 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
- Supported bitrates: Between 8 kbps and 320 kbps. Incompatible files can not be played.

■ **WMA (.wma or .WMA)**
WMA stands for Windows Media Audio and is an audio compression technology developed by Microsoft Corporation. Audio can be encoded in WMA format by using Windows Media® Player.
- WMA files must have the copyright option turned off.
- Supported sampling rates: 8 kHz, 11.025 kHz, 22.05 kHz, 32 kHz, 44.1 kHz, 48 kHz

- Supported bitrates: Between 5 kbps and 320 kbps. Incompatible files can not be played.
- WMA Pro/Voice formats are not supported.

■ **WMA Lossless (.wma or .WMA)**
- Supported sampling rates: 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz
- Quantization bit: 16 bit, 24 bit

■ **WAV (.wav or .WAV)**

WAV files contain uncompressed PCM digital audio.
- Supported sampling rates: 8 kHz, 11.025 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz, 176.4 kHz and 192 kHz
- Quantization bit: 8 bit, 16 bit, 24 bit

  ✳ For playback from a USB storage device, sampling rates of 176.4 kHz and 192 kHz are not supported.

■ **AAC (.aac/.m4a/.mp4/.3gp/.3g2/.AAC/.M4A/.MP4/.3GP or .3G2)**
- Supported formats: MPEG-2/MPEG-4 Audio
- Supported sampling rates: 8 kHz, 11.025 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz
- Supported bitrates: Between 8 kbps and 320 kbps. Incompatible files can not be played.

■ **FLAC (.flac or .FLAC)**

FLAC is a file format for lossless audio data compression.
- Supported sampling rates: 8 kHz, 11.025 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz, 176.4 kHz and 192 kHz
- Quantization bit: 8 bit, 16 bit, 24 bit

■ **Ogg Vorbis (.ogg or .OGG)**
- Supported sampling rates: 8 kHz, 11.025 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
- Supported bitrates: Between 48 kbps and 500 kbps. Incompatible files can not be played.
- Incompatible files can not be played.

■ **LPCM (Linear PCM)**
- Supported sampling rates: 44 kHz, 48 kHz
- Quantization bit: 16 bit

  ✳ Only for playback via DLNA.

■ **Apple Lossless (.m4a/.mp4/.M4A/.MP4)**
- Supported sampling rates: 8 kHz, 11.025 kHz, 12 kHz, 16 kHz, 22.05 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz, 64 kHz, 88.2 kHz, 96 kHz
- Quantization bit: 16 bit, 24 bit

■ **DSD (.dsf or .DSF)**
- Supported sampling rates: 2.8224 MHz

Remote Control Code List

■ Television (A to E)

A.R. Systems	10037, 10556
Accent	10037
Acoustic Solutions	11667, 11585, 11037
Action	10650
Addison	10653, 11150
AEG	11037
Aiko	10037
Aim	10037
Akai	10037, 12676, 10208, 10714, 10556, 12414, 13183, 10178
Akiba	10037
Akito	10037
Akura	10037, 10714, 11667, 11585, 10171, 11037
Alba	11037, 12676, 10037, 10714, 11585
Alien	11037
Allstar	10037
Amstrad	10037, 10171, 11037
Anam	10037, 10650
Andersson	11585, 12676
Anitech	10037
Ansonic	10037
AOC	11365, 12769, 10178, 10625, 11150
Apex Digital	12397
Ardem	10714, 10037
Arena	10037
Ario	12397
Aristona	10556, 10037
ART	11037
Art Mito	11585
Asberg	10037
Astra	10037
ATD	10698
Atlantic	10037
Audiosonic	10714, 10037
Audioworld	10698
Autovox	12676
Aventura	10171
Axxon	10714
Baird	10208
Barco	10556
Base	10698
Basic Line	10037, 11037, 10556
Baur	10037, 10195
Beaumark	10178
Beijing	10208
Beko	10714, 10037
Bell & Howell	10017
Belson	10698
Belstar	11037
Beon	10037
Berthen	10556
Bestar	10037
Bexa	12493
BGH	12414
Black Diamond	11037
Blaupunkt	10195
Blue Sky	10714, 10037, 11037, 10556, 10625
BPL	10208, 10037
Brandt	10625, 11585, 10714
Brinkmann	10037
Brionvega	10037
Britania	12414
Bush	11037, 10037, 10714, 12676, 11667, 10208, 10556, 10698, 11585
Byd:sign	12209
Camper	10037
Carad	11037
Carena	10037
Carrefour	10037
Cascade	10037
Casio	10037
Cathay	10037
CCE	13782, 10037
Celcus	12676, 11585
Celebrity	10000
Centrum	11037
Centurion	10037
Changhong	13434, 12769, 10508
Chimei	12769
Chun Yun	10000, 11150
Chung Hsin	11150
Clarivox	10037
Clatronic	10037, 10714
Clayton	11037
Coby	13478
Commercial Solutions	11447
Condor	10037
Conrowa	10698
Contec	10037
Cosmel	10037
CPTEC	10625
Crown	10037, 10714, 10208, 11037
Crypton	11667
Curtis	12397
Cyberpix	11667
D-Vision	10037, 10556
Daewoo	10037, 10556, 10178, 11150
Dansai	10037, 10208
Dantax	11037, 10714, 12676
Datsura	10208
Dawa	10037
Daytron	10037
De Graaf	10208
Decca	10037
Denver	10037
Desmet	10037
Diamant	10037
Diamond	10698
Digatron	10037
Digihome	11667, 12676
Digiline	10037
Digisonic	11826
Digitor	10698, 10037
Dixi	10037
Drean	10037
DSE	10698
Dual	11667, 10037, 11037, 11585, 12676, 10714
Dumont	10017
Durabrand	10171, 10178, 10714, 11037
Dux	10037
DX Antenna	13817
Dynatron	10037
Dynex	12049
E.S.C.	10037
ECE	10037
Elbe	10037, 10556

Electroband	10000
Electrograph	11755
Elektra	10017
Elfunk	11037
ELG	10037
Elin	10037
Elite	10037
Emerson	11864, 10171, 11394, 10178, 10037, 10714
Envision	11365, 11506
Epson	11379
Erres	10037
ESA	10171
Euroman	10037
Europa	10037
Europhon	10037
Evesham Technology	11667
Excello	11037
Exquisit	10037

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F&U	12676
FairTec	11585
Ferguson	10625, 11037, 10037, 10195, 11585, 12676
Fidelity	10037, 10171
Finlandia	10208
Finlux	11667, 10714, 12676, 10037, 10556
Firstline	10714, 10037, 11037, 10208, 10556
Fisher	10208
Flint	10037
Formenti	10037
Fraba	10037
Freesat	11636
Friac	10037
Frigidaire	11826
Fujitsu	10809
Fujitsu Siemens	10809
Funai	13817, 10171, 11394, 11037, 10714
Gaba	11037
Galaxi	10037
Galaxis	10037
Gateway	11755
GE	11447, 10178, 10625, 11454
GEC	10037
Genesis	10037
Genexxa	10037
GFM	10171, 11864
Gibralter	10017
Gibson	11826
Gintai	11150
Godrej	11585
GoGen	12676
GoldStar	10178, 10037, 10714, 11150
Goodmans	10037, 11037, 11667, 10714, 11585, 10556, 10625, 12676
Gorenje	11585, 12676
Gradiente	10037
Graetz	10714
Granada	10208, 10037
Grandin	10037, 10714, 11037, 10556
Grundig	10195, 11223, 10556, 10037, 11667, 12676
H-Buster	13620
Haier	13620, 10698, 10037, 10508
Hallmark	10178
Hankook	10178
Hannspree	11826
Hanseatic	10037, 10714, 10625, 10556
Hantarex	10037
Hantor	10037
Harwood	10037
Hauppauge	10037
HB	10714
HCM	10037
Heran	11826
Herosonic	11826
Highline	10037
Hinari	10037, 10208
HiPlus	11826
Hisawa	10714
Hisense	10556, 10508, 10208
Hitachi	11643, 12676, 11576, 11585, 11691, 11037, 11667, 10037, 10150, 10178, 10508, 11150, 12170
Hitachi Fujian	10150
Hitec	10698
Hoher	10714
Hornyphon	10037
Hua Tun	11150
Hypson	10037, 10714, 10556, 11037
Hyundai	10698, 12676, 11037
Iberia	10037
ICE	10037
iLo	11394
Imperial	10037
Indiana	10037
Inno Hit	11037, 11585
Innova	10037
Insignia	12049, 10171
Integra	11807, 13100, 13500
Inteq	10017
Interbuy	10037
Interfunk	10037
Internal	10556
Intervision	10037
Irradio	10037
IRT	10698
Isis	12676
Isukai	10037
ITS	10037
ITT	12676, 10208
ITT Nokia	10208
ITV	10037
JCB	10000
Jinfeng	10208
Jinxing	10037, 10556, 10698
JMB	12676, 10556
Jubilee	10556
JVC	11774, 10653, 11601, 12271, 11428, 10508, 10650, 12676

■ Television (K to N)

Kaisui	10037
Karcher	10714
Kathrein	10556
Kendo	11037, 11585, 12676, 10037
Kennex	11037
Kioto	10556
Kiton	10037
KLL	10037
Kneissel	10037, 10556
Kolin	10150, 10037, 11150, 11755
Kolster	10037
Konka	10037, 10714

Konnig	10037
Korpel	10037
Kosmos	10037
Kunlun	10208
Kupperbusch	12676
L&S Electronic	10714
Lavis	11037
Lecson	10037
Lenco	10037, 11037
Leyco	10037
LG	11840, 11860, 11423, 12731, 12182, 12358, 12362, 10178, 12424, 10037, 10714, 10017, 10556, 10698
LiesenKotter	10037
Lifetec	10037, 11037, 10714
Linetech	12676
Linsar	12676, 11667, 11585
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Local Malaysia Brand	10698
Lodos	11037
Loewe	10633
Logik	11037, 10698, 11585
Luma	11037
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Lumenio	10037
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Matsui	10037, 10195, 10208, 11037, 10714, 10556, 11667, 12676
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MEI	11037
Melectronic	10037, 10195, 10714
Memorex	10178, 10150, 11037
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Metronic	10625
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MGA	10150, 10178
Micromaxx	10037, 10714, 11037
Midland	10017
Mikomi	11585, 11667
Minato	10037
Minerva	10195
Ministry Of Sound	11667
Minoka	10037
Mitsubishi	10150, 11250, 12313, 10178, 10037, 10556, 11150, 11037, 11171
Moree	10037
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MTlogic	10714
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Multitec	11037, 10037
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Myryad	10556
NAD	10037, 10178
Naiko	10037
Nakimura	10037
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NEC	12461, 10178, 10508, 10653, 11150
Neckermann	10037, 10556
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Neoka	11826
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Nevir	12676
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New Tech	10037, 10556
Newave	10178, 11150
Nikkai	10037
Nikkei	10714
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Nokia	10208
Norcent	11365
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Normerel	10037
Novatronic	10037
Novita	11585
NPG	13434

■ **Television (O to S)**

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OK.	13434, 12676
Okano	10037
OKI	11667, 12676, 13434, 11585
Omni	10698
Onei	11667
Onida	10653, 12414
Onimax	10714
Onix	10698
Onkyo	11807, 13100, 13500
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Opera	10037, 10714
Optimus	10650
Orava	11037
Orbit	10037
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Orline	10037
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Osaki	10037, 10556
Osio	10037
Osume	10037
Otto Versand	10037, 10556, 10195
Pacific	10714, 11037, 10556
Palladium	10037, 10714, 10556
Palsonic	12461, 10698, 10037
Panama	10037

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Panavision	10037
Panda	10208, 10508, 10698
Penney	10178
Perdio	10037
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Philips	10037, 12800, 10556, 11887, 11867, 11506, 12372, 12680, 11454, 10171, 11365, 10017, 10000, 10178, 11394
Phocus	10714
Phoenix	10037
Phonola	10037, 10556
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PJ	11506
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Radiotone	10037, 11037
RCA	11447, 12746, 10625, 12434, 12932, 12187, 10000, 10178, 10618, 11454, 13426
Realistic	10178
Recor	10037
Rectiligne	10037
Red Star	10037
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Cannon Valley Cablevision	01481, 01998, 03028
Caprock TV	01376, 01877, 01982
Carnegie Cable	01376, 01877, 01982
Carolina Mountain Cable	01376, 01877, 01982
Carr Communications	01376, 01877, 01982
Carrell Communications	01376, 01877, 01982
CAS Cable	01376
Cascade Communications	01376, 01877, 01982
Casey Cable	01376, 01877, 01982
Caspian Community TV	01376, 01877, 01982
Cass Cable	01376
Castle Cable Service	01376, 01877, 01982
Catalina Cable	01376, 01877, 01982
Catawba Services	01376, 01877, 01982
CBN	01376, 01877, 01982
CBPU Cable	01376, 01877, 01982
CCAP	01877
CDE Lightband	00858, 01615, 02586
Cedar Falls Utilities	01376
Celect Communications	01376, 01877, 01982
Cencom	01376, 01877, 01982
CentraCom Interactive	01376, 01877, 01982
Central Texas Communications	01376, 01877, 01982
Central Valley Cable	01376, 01877, 01982
Centre TV Cable	01376, 01877, 01982
Centrovision	01376, 01877, 01982
Century Communications	01376, 01877, 01982
Century Telephone	01376, 01877, 01982
CenturyLink	01998
CenturyTel TeleVideo	01376, 01877, 01982
Chambers Cable	01376
Champion Broadband	01376, 01877, 01982

Chaparral Cablevision	01376, 01877, 01982
Chariton Valley Communications	01376, 01877, 01982
Charter	01376, 01877, 02187
Chatmoss Cablevision	01376, 01877, 01982
Chequamegon Telephone Cooperative	01898, 01615
Chesnee Communications	01376, 01877, 01982
Chester Telephone	01376
Chinook Progressive Club TV	01376, 01877, 01982
Chippewa Valley Cable	01376, 01877, 01982
Choice Cable TV	01376, 01877, 01982
Choice Communications	01376, 01877, 01982
Choice Television	01376, 01877, 01982
ChoiceCable	01376
Christy Cablevision	01376, 01877, 01982
CimTel	01376
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Cisco	01877, 01982, 00858, 02589, 03028, 02132, 02345, 01582, 01883, 02378, 02401, 03265
Citizens Cable	01376
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Citizens Cablevision	01481
Citizens Mutual Telephone	01376, 01877, 01982
Citizens Telecom	01376, 01877, 01982
Citizens Telephone	02586
City Cablevision	01376, 01877, 01982
City of Barnesville Cable	01376, 01877, 01982
City of Baxter Springs Cable	01376, 01877, 01982
City of Hawarden Cable	01376, 01877, 01982
City of Norway Cable	01376, 01877, 01982
City of Quitman Cable	01376, 01877, 01982
City Of Salisaw	01376
City of Sumas TV Cable System	01376, 01877, 01982
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Claro	01376
Clear Creek Communications	01376
Clearview Cable	01376, 01877, 01982
Clearview Partners	01376, 01877, 01982
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Clinton Cable	01376, 01877, 01982
CLT Communications	01376, 01877, 01982
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CMA Communications	01376
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Coast Cable Communications	01376
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Coast Communications	01376
Coastal Link	01376
Coaxial Cable TV	01376, 01877, 01982
Cobridge	01376
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Cogeco	01376, 01877, 01982
Colane Cable TV	01376, 01877, 01982
Colfax Highline Cable	01376, 01877, 01982
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Colonial Cablevision	01376, 01877, 01982
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Communication Services	01376, 01877, 01982
Communicomm	01376, 01877, 01982
Community Antenna Service	01376, 01877, 01982
Community Antenna System	01376, 01877, 01982
Community Cable & Broadband	01376
Community Cable Service	01376, 01877, 01982
Community Communications	01376, 01877, 01982
Community Telecom	01376, 01877, 01982
Community Television	01376, 01877
Compas Cable	01376, 01877, 01982
Complete Communication Services	01376, 01877, 01982
Comserv Ltd	01376, 01877, 01982
ComSouth	01376, 01877, 01982
ComSpan Communications	01481, 01898
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Consolidated Cable	01376, 01877, 01982
Consolidated Communications	01376
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Conway Corporation Cable TV	01376, 01877, 01982
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Coon Creek Telephone	01376
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CoopTel	00858, 01615, 01898
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Country Cable	01376, 01877, 01982
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Cowley Telecable	01376, 01877, 01982

Cox	01877, 01376
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Crow Cable TV	01376, 01877, 01982
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CSI Cable	01376, 01877, 01982
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Cunningham Telephone & Cable	01376
Curtis Cable TV	01376, 01877, 01982
CUTV	01376, 01877, 01982
CWA Cable	01376, 01877, 01982
D & D Cable Systems	01376, 01877, 01982
D & P Communications	01376
Daeryung	01877
Dairyland Cable Systems	01376, 01877, 01982
Dakota Central Telecommunications	02345
Dalton Cable Television	01877, 01982
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Davis Communications	01376, 01877, 01982
Dawson City Television	01376, 01877, 01982
DCA Cablevision	01376, 01877, 01982
DDD Cablevision	01376, 01877, 01982
Dean Hill Cable	01376, 01877, 01982
Dean's Cablevision	01376, 01877, 01982
Decca Cable	01376, 01877, 01982
Deffner Cable TV	01376, 01877, 01982
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Delta	02015, 00660
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Demopolis CATV	01376, 01877, 01982
Denali TV	01376, 01877, 01982
Dery Telecom	01376
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Dixon Telephone	01376, 01877, 01982
DMS Cable	01376, 01877, 01982
Downsville Community Antenna	01376, 01877, 01982
Doylestown Cable TV	01376, 01877, 01982
Drummond Cable TV	01376, 01877, 01982
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Du	02401
Dumont Telephone	01376, 01877, 01982
Duncan Cable TV	01376, 01877, 01982
Eagle Broadband	01481, 01998, 03028
Eagle Cablevision	01376, 01877, 01982
Eagle Communications	01376, 02187
Eagle Valley Telephone	01481, 01998, 03028
EagleVision Wireless TV Services	01376, 01877, 01982
East Arkansas Video	01376
East Cleveland Cable	01376, 01877, 01982
East Texas Cable	01376, 01877, 01982
Eastern Cable	01376, 01877, 01982
EastLink	01376
Easton Cable	01877
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Electron Enterprises	01376, 01877, 01982
Elk River Cable TV	01376, 01877, 01982
Elkhart TV Cable	01376, 01877, 01982
Emery Telcom Video	01376, 01877, 01982
Emily Coop Telephone	01481, 01615
Enhanced Telecommunications	01376
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EPB of Chattanooga	00858
Escape Broadband	01376, 01877, 01982
Eston CATV Cooperative	01376, 01877, 01982
ETAN Industries	01376, 01877, 01982
Etex	02586
Execulink	01376
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FairPoint Communications	01376, 01877, 01982
Falls Earth Station	01376, 01877, 01982
FamilyView Cablevision	01376, 01877, 01982
Fannettsburg Cable TV	01376, 01877, 01982
Farmer & Merchant Mutual	01376, 01877, 01982
Farmer's Telephone Cooperative	01998, 03028
Farmers Independent Telephone	01376, 01877, 01982
Farmers Mutual Telephone	01376, 01877, 01982
Fayetteville Electric System	01877
Federated Telephone	01376
Fenton Cablevision	01376, 01877, 01982
FiberCast Cable Communications	01376, 01877, 01982
FiberNet Monticello	01376, 01877, 01982
Fibrant	01376, 01877, 01982
Fidelity Communications	01376

First Cable Of Missouri	01376, 01877, 01982
FirstMile	01376, 01877, 01982
Flint Cable TV	01376, 01877, 01982
Florida Cable	01376
Foothills Rural Telephone Cooperative	01877
Forsyth CableNet	01376, 01877, 01982
Fort Jennings Communications	02586
Fort Towson Cable	01376, 01877, 01982
Foster Communications	01376, 01877, 01982
Frank Howard TV Cable	01376, 01877, 01982
Frankfort Plant Board Cable	01376
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Futuristic Cablevision	01376, 01877, 01982
Galaxy American Communication	01376, 01877, 01982
Galaxy Cable	01376, 01877, 01982
Gardonville Cooperative Telephone	01998
Gatehouse Networks	01376, 01877, 01982
Gauthier Cablevision & Electric	01376, 01877, 01982
GCI	01877
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Genext	01376, 01877, 01982
Geraldine Cable TV	01376, 01877, 01982
Get Real Cable	01376, 01877, 01982
GEUS	01376, 01877, 01982
Giant Communications	01376, 01877, 01982
Giles-Craig Communications	01376, 01877, 01982
Gilmer Cable Television	01376, 01877, 01982
Glasgow Electric Plant Board	01376, 01877, 01982
Glass Antenna Systems	01376, 01877, 01982
Glenwood Telecommunications	01376
Glide Cablevision	01376, 01877, 01982
Globalcom	01376, 01877, 01982
Golden Belt Telephone	02586
Golden Communications	01376, 01877, 01982
Golden Rain Foundation	01376, 01877, 01982
Golden Valley Cable	01376, 01877, 01982
Golden West Telecommunications	01376, 01877, 01982
Goldfield Communications	01376, 01877, 01982
Gorham Communications	01481
Gowrie Cablevision	01376, 01877, 01982
Grafton Cable Communications	01376, 01877, 01982
Grand River Cable	01376, 01877, 01982
Grande Communications	01877, 01376
Great Plains Communications	01376
Green Hills Communications	01376, 01877, 01982
Greene County Cable TV	01376, 01877, 01982
Greenlight Community Broadband	01376, 01877, 01982
Gridley Cable	01376, 01877, 01982
Griswold Cooperative Telephone	01481, 01998, 03028
Grove Cable	01376, 01877, 01982
Grundy Center Utilities	01376, 01877
GTI	01481, 01998, 03028
Guadalupe Valley	01877
Haefele TV	01376, 01877, 01982
Haines Cable TV	01376, 01877, 01982
Hall Beach Cooperative	01376, 01877, 01982
Hamilton County Cable TV	01877, 01982, 01376
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Hargray	01376, 01877, 01982
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Harlan Municipal Utilities	01376
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Harris Broadband	01376
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Hart Cable	01376, 01877, 01982
Hart Electric	01376, 01877, 01982
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Hastings Cable Vision	01376, 01877, 01982
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Hawaiian Telcom	03028
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HBL Communications	01376, 01877, 01982
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Healthcare Cable Systems	01376, 01877, 01982
Heart of Iowa Communications	01376, 01877, 01982
Heartland Cable	01376, 01877, 01982
Heartland Wireless Communications	01376, 01877, 01982
Heck's TV & Cable	01376, 01877, 01982
Henderson Telephone	01376, 01877, 01982
Hermosa Cablevision	01376, 01877, 01982
Herr Cable	01376, 01877, 01982
HFU Television	01376, 01877, 01982
Hiawatha Broadband	01376, 01877, 01982
HickoryTech	01898
High Plains Cablevision	01376, 01877, 01982
Highland	01376, 01877, 01982
Hill Top Communications	01376, 01877, 01982

Hinton CATV	01376, 01877, 01982
HLM Cable Corp	01376, 01877, 01982
HomeTel	01376
Hometown Cable	01376, 01877, 01982
Hometown Utilicom	01376, 01877, 01982
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Hoonah Community Television	01376, 01877, 01982
Hooper Telephone	01376, 01877, 01982
Horizon Cable TV	01376, 02586
Horizon Telecom	02586
Horry Telephone Cooperative	01376, 01877, 01982
Hospers Telephone	01376, 01877, 01982
Hotwire	02586
Houston Cable	01376, 01877, 01982
Hrvatski Telekom	02132
HTC Communications	01481, 01998, 03028
HTC Services	01376, 01877, 01982
Humax	00660, 02620, 02043, 02165
HunTel Systems	01376
Huxley Communications	01376, 01877, 01982
Hydaburg Cable TV	01376, 01877, 01982
HYDE County Cablevision	01376, 01877, 01982
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ICE Cable Holdings	01376
ICS Communications	01376, 01877, 01982
Illini Cablevision Of Illinois	01376, 01877, 01982
ImOn Communications	01877
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Interstate Cablevision	01481, 01998, 03028
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Irvine Community TV	01376, 01877, 01982
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Jack McClanahan Cable TV	01376, 01877, 01982
Jackson Energy Authority	01376, 01877, 01982
Jaguar Communications	01376, 01877, 01982
James Cable Partners	01376, 01877, 01982
James Valley Cooperative Telephone	02586
Jayroc Cablevision	01376, 01877, 01982
Jefferson County Cable	01376, 01877, 01982
Jefferson Telecom	01376, 01877, 01982
Jeffersonville Cable TV	01376, 01877, 01982
Jet Broadband	01376
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Kalona Cooperative Telephone	02586
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KAS Cable TV	01376, 01877, 01982
Kaslo Cable	01376, 01877, 01982
KBS Cable TV	01376
Keene Valley Video	01376, 01877, 01982
Kelley Communications	01376, 01877, 01982
Kennebec Telephone	01376, 01877, 01982
Kennedy Cablevision	01376, 01877, 01982
Kentucky Ridge Country Communications	01376, 01877, 01982
Keta Cable	01376, 01877, 01982
KFW Communications	01376, 01877, 01982
Kincardine Cable TV	01376
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Kugluktuk Cooperative	01376, 01877, 01982
Kuhn Communications	01376, 01877
L & J Cable	01376, 01877, 01982
La Harpe Communications	01376, 01877, 01982
La Harpe Video and Data Services	01376, 01877
Lafayette Utilities System	01376
Laguna Serrano Cable	01376, 01877, 01982
Lake Cable	01376, 01877, 01982
Lakeland Cablevision	01376, 01481, 01877, 01982, 01998
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Lamont Digital Systems	01376, 01877, 01982
Lang	01376, 01877, 01982
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Lexcom Cable Services	01376, 01877, 01982
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Longview Communications	01376, 01877, 01982
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Lost Island Cable TV	01376, 01877, 01982
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Lycom Communications	01376, 01877, 01982
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Martelle Communications Cooperative	01376, 01877, 01982
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Matanuska Telephone Association	01481, 02586
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McDonough Telephone Cooperative	01376, 01877, 01982
McKee TV Enterprises	01376, 01877, 01982
McNabb Cable	01376, 01877, 01982
MCV Broadband	01877
Media One	01376, 01877, 01982
Mediacom	01376, 01877, 01982
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MetroCast Cablevision	01376, 01982, 01877
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Metropolitan Cable	01376, 01877, 01982
MGS Cablevision	01376, 01877, 01982
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Microwave Satellite Technologies	01481, 01998, 03028
Mid Century Telecom	01481, 01615
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Mid-Coast Cablevision	01376, 01877, 01982
Mid-Hudson Cable	01376
Mid-Rivers Communications	01376
Mid-South Cablevision	01376, 01877, 01982
Midamerican Cable Systems	01376, 01877, 01982
Midcontinent Communications	01376, 01877, 01982
Midstate Communications	01376, 01877, 01982
Midtel Cable TV	01376, 01877, 01982
Milcom Cable	01376, 01877, 01982
Milford Cable TV	01376, 01877, 01982
Milk River Cable Club	01376, 01877, 01982
Millennium Telecom	01481, 01998, 03028
Millheim TV Transmission	01376, 01877, 01982
Millington CATV	01376, 01877, 01982
Minburn Communications	01481, 01998, 03028
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MINET	01877
MLGC Cable TV	01376, 01877, 01982
MM&G Enterprises	01481, 01998, 03028
MMDS Wireless East	01376, 01877, 01982
Mobius Communications	01376, 01877, 01982
Monroe Cablevision	01376, 01877, 01982

Monroe Utilities	01376, 01877, 01982
Montana Opticom	01376, 01877, 01982
Moosehead Enterprises	01376, 01877, 01982
Morris Broadband	01376
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Motorola	01376, 02437, 02378, 01998, 00858, 02952, 01562, 01982, 02401
Moultrie Telecommunications	01376, 01877, 01982
Mountain Shadows Cable TV	01376, 01877, 01982
Mountain Telecommunications	01376, 01877, 01982
Mountain Zone TV	01376, 01877, 01982
Movistar	03288
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MTC	01376, 01877, 01982
MTC Technologies	01376, 01982
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Multiband Cable	01376, 01877, 01982
Municipality Cable Operator	01376, 01877, 01982
Murphy Cable	01376, 01877
Murray Electric System	01376, 01877, 01982
Muscatine Power & Water	01376
N.W. Communications	01376, 01877, 01982
National Cable	01376, 01877, 01982
Naujat Cooperative	01376, 01877, 01982
NDTC	01481, 01998, 03028
Nebraska Central Telecom	01376, 01877, 01982
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Nelsonville TV Cable	01376, 01877, 01982
Nemont Communications	01376, 01877
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New Century Communication	01376, 01877, 01982
New Day Broadband	01376, 01877, 01982
New England Cable	01376, 01877, 01982
New Jersey Broadband	01376, 01877, 01982
New Knoxville Cable Systems	01376, 01877, 01982
New North Networks	01376, 01877, 01982
New Paris Quality Cablevision	01376, 01877, 01982
New Visions Communications	01376, 01877, 01982
New Windsor Cable TV	01376, 01877, 01982
Newcastle Cablevision	01376, 01877, 01982
Newpath Communications	01877, 01982
NewWave Communications	01376, 02187
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Nexicom Communications	01376, 01877, 01982
Nextgen Communications	01376, 01877
Niagara Community TV Cooperative	01376, 01877, 01982
Nimpkish Valley Communcations	01376, 01877, 01982
Nittany Media	01376
Nor-Cal Cable Systems	01376, 01877, 01982
Nortex Communications	01376, 01877, 01982
North American Communications	01376, 01877, 01982
North Central Telephone	02345
North Crossroads Communications	01376, 01877, 01982
North Dakota Telephone	02586
North Star Cablevision	01376, 01877, 01982
North State Communications	00858
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Northland Communications	01376
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West Lake Cablevision	01376, 01877, 01982
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